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NEWS 23 AUG 15 CAOLD to be discontinued on December 31, 2008  
NEWS 24 AUG 15 CAPLUS currency for Korean patents enhanced  
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to be discontinued  
NEWS 28 SEP 25 CA/CAPLUS current-awareness alert options enhanced  
to accommodate supplemental CAS indexing of  
exemplified prophetic substances  
NEWS 29 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and  
and Korean patents enhanced  
NEWS 30 SEP 29 IFICLS enhanced with new super search field  
NEWS 31 SEP 29 EMBASE and EMBAL enhanced with new search and  
display fields  
NEWS 32 SEP 30 CAS patent coverage enhanced to include exemplified  
prophetic substances identified in new Japanese-  
language patents

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AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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=> file chemistry

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=> s (conjugated (2w) linoleic (2w) ester) (1) (distilling or distillation)  
L1 3 (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DISTILL  
ATION)

=> d l1 1-3 ibib abs

L1 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on SIN

ACCESSION NUMBER: 2005:673080 CAPLUS

DOCUMENT NUMBER: 143:159467

TITLE: Production and purification of esters of conjugated  
linoleic acids

INVENTOR(S): Rongione, Joseph C.; Galante, Jenifer Heydinger;  
Clauss, Steven L.; Bernhardt, Randal J.; Xayariboun,  
Phouvieng

PATENT ASSIGNEE(S): Stepan Company, USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005067888	A1	20050728	WO 2003-US41289	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2550100	A1	20050728	CA 2003-2550100	20031223
AU 2003299920	A1	20050803	AU 2003-299920	20031223
EP 1696873	A1	20060906	EP 2003-800190	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
BR 2003018676	A	20061128	BR 2003-18676	20031223
NO 2006002762	A	20060629	NO 2006-2762	20060613
US 20070191619	A1	20070816	US 2007-581374	20070312
PRIORITY APPLN. INFO.:			WO 2003-US41289	W 20031223

AB A process to refine esters of conjugated linoleic acids via distn  
. in a single or multi-pass distillation operation is provided.  
Thermal rearrangement of conjugated linoleic acid components during  
distillation is prevented or reduced by the use of a low residence time

and/or reduced pressure distillation apparatus A process to produce refined esters of conjugated linoleic acids is also provided. The process transesterifies a linoleic acid-containing oil to generate an alkyl ester composition which further undergoes isomerization at a temps. typically between about 90-140 °C to form an ester stream containing conjugated linoleic acid esters, which is then distilled to obtain the refined esters of conjugated linoleic acids. The transesterification and isomerization steps can be performed in one reaction vessel without an intervening distillation step. The transesterification and isomerization steps can occur concurrently in a continuous reaction system using a dual reaction zone apparatus Refined ester compns. produced by the processes and enriched in desirable conjugated linoleic acid isomers are also contemplated. For example, Safflower oil Me esters were distilled via two passes in a thin film evaporator to reduce the amount of Me palmitate, Me stearate, Me oleate, and increase the percentage of Me linoleate.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:545124 CAPLUS

DOCUMENT NUMBER: 143:61741

TITLE: Manufacture of triglycerides of conjugated linoleic acid

INVENTOR(S): Westfechtel, Alfred; Busch, Stefan; Grundt, Elke; Horlacher, Peter

PATENT ASSIGNEE(S): Cognis Ip Management G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1544282	A1	20050622	EP 2004-28972	20041207
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
DE 10358826	A1	20050714	DE 2003-10358826	20031216
US 20050171368	A1	20050804	US 2004-13834	20041216
US 7067684	B2	20060627		

PRIORITY APPLN. INFO.: DE 2003-10358826 A 20031216

OTHER SOURCE(S): MARPAT 143:61741

AB The title triglycerides are manufactured by transesterification of C1-5 alkyl esters of conjugated linoleic acid with triacetin at 90-160° in the presence of basic catalysts. Triacetin is soluble in the reaction mixture and the use of solvents or compatibilizers is not required. For example, adding 0.04 mol NaOMe to a mixture of 1.0 mol conjugated linoleic acid Me ester and 0.3 mol triacetin at 90° under N, heating the mixture at 130° with removal of AcOMe by distillation, continuing the heating for 1 h and for 3 h in vacuo, and neutralizing with citric acid at 80° gave a product having acid number 2.1 mg KOH/g, saponification number 189 mg KOH/g, OH number 15.7 mg KOH/g and iodine number 134, and containing 55.7% triglyceride, 14.6% diglyceride and 0.8% monoglyceride.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:991690 CAPLUS  
 DOCUMENT NUMBER: 140:40974  
 TITLE: Lipase catalyzed hydrolysis of conjugated linoleic acid esters  
 INVENTOR(S): Zander, Lars; Busch, Stefan; Meyer, Carolin; Both, Sabine; Schoerken, Ulrich  
 PATENT ASSIGNEE(S): Cognis Deutschland G.m.b.H. & Co. K.-G., Germany  
 SOURCE: PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104472	A1	20031218	WO 2003-EP5598	20030528
W: CA, JP, NO, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
DE 10225117	A1	20040108	DE 2002-10225117	20020606
CA 2488060	A1	20031218	CA 2003-2488060	20030528
EP 1509613	A1	20050302	EP 2003-757002	20030528
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 2005528919	T	20050929	JP 2004-511531	20030528
US 20050255570	A1	20051117	US 2004-516987	20041206
US 7138256	B2	20061121		
NO 2004005513	A	20041217	NO 2004-5513	20041217
PRIORITY APPLN. INFO.:			DE 2002-10225117	A 20020606
			WO 2003-EP5598	W 20030528

OTHER SOURCE(S): CASREACT 140:40974; MARPAT 140:40974  
 AB The invention relates to a method for producing conjugated linoleic acid whereby (a) conjugated linoleic acid low alkyl esters are hydrolyzed with water in the presence of enzymes, while the alc. is continuously removed, (b) the hydrolyzate is separated into an organic phase and an aqueous/alc. phase, and (c) the organic phase containing the conjugated linoleic acid is liberated from non-reacted conjugated linoleic acid low alkyl esters.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

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L1 3 S (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DIS

=> s (safflower (a) oil (3w) methyl (a) ester) (L) (conjugated (2w) linoleic) (L) distillation

29 FILES SEARCHED...

L2 1 (SAFFLOWER (A) OIL (3W) METHYL (A) ESTER) (L) (CONJUGATED (2W) LINOLEIC) (L) DISTILLATION

=> d l2 ibi abs

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 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
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 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
                   SCAN must be entered on the same line as the DISPLAY,  
                   e.g., D SCAN or DISPLAY SCAN)  
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 IMAX ----- MAX, indented with text labels  
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 OIBIB ----- OBIB, indented with text labels  
  
 SBIB ----- BIB, no citations  
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L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on SIN

ACCESSION NUMBER: 2005:673080 CAPLUS

DOCUMENT NUMBER: 143:159467

TITLE: Production and purification of esters of conjugated linoleic acids

INVENTOR(S): Rongione, Joseph C.; Galante, Jenifer Heydinger; Clauss, Steven L.; Bernhardt, Randal J.; Xayariboun, Phouvieng

PATENT ASSIGNEE(S): Stepan Company, USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005067888	A1	20050728	WO 2003-US41289	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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CA 2550100	A1	20050728	CA 2003-2550100	20031223
AU 2003299920	A1	20050803	AU 2003-299920	20031223
EP 1696873	A1	20060906	EP 2003-800190	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
BR 2003018676	A	20061128	BR 2003-18676	20031223
NO 2006002762	A	20060629	NO 2006-2762	20060613
US 20070191619	A1	20070816	US 2007-581374	20070312
PRIORITY APPLN. INFO.:			WO 2003-541289	W 20031223
AB	A process to refine esters of conjugated linoleic acids via distillation in a single or multi-pass distillation operation is provided. Thermal rearrangement of conjugated linoleic acid components during distillation is prevented or			

reduced by the use of a low residence time and/or reduced pressure distillation apparatus. A process to produce refined esters of conjugated linoleic acids is also provided. The process transesterifies a linoleic acid-containing oil to generate an alkyl ester composition which further undergoes isomerization at a temps. typically between about 90-140 °C to form an ester stream containing conjugated linoleic acid esters, which is then distilled to obtain the refined esters of conjugated linoleic acids. The transesterification and isomerization steps can be performed in one reaction vessel without an intervening distillation step. The transesterification and isomerization steps can occur concurrently in a continuous reaction system using a dual reaction zone apparatus. Refined ester compns. produced by the processes and enriched in desirable conjugated linoleic acid isomers are also contemplated. For example, Safflower oil Me esters were distilled via two passes in a thin film evaporator to reduce the amount of Me palmitate, Me stearate, Me oleate, and increase the percentage of Me linoleate.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s soybean (a) oil (L) conjugated (a) linoleic (4w) ester

31 FILES SEARCHED...

L3 2 SOYBEAN (A) OIL (L) CONJUGATED (A) LINOLEIC (4W) ESTER

=> d l3 1-2 ibib abs

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:535671 CAPLUS

DOCUMENT NUMBER: 129:148528

ORIGINAL REFERENCE NO.: 129:30283a,30286a

TITLE: Controlled-release fertilizer granules coated with polyesters and thermosetting resins

INVENTOR(S): Suzuki, Toshihiro; Kobayashi, Kenji; Miyashita, Tetsu

PATENT ASSIGNEE(S): Tonen Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10218693	A	19980818	JP 1997-34303	19970204
PRIORITY APPLN. INFO.:			JP 1997-34303	19970204

AB Title granules, which are free from aggregation, have primary coatings comprising aliphatic polyesters and secondary coatings comprising thermosetting resins. Urea fertilizer was coated with di-Et succinate-1,4-butanediol copolymer and a composition comprising soybean oil-modified alkyl resin 30, tung oil 50, conjugated linoleic acid pentaerythritol ester 15, and metal soap 5 weight% to give fertilizer granules showing no aggregation and 8, 21, and 41% N release in H2O after 30, 60, and 90 days, resp.

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:146810 CAPLUS  
 DOCUMENT NUMBER: 118:146810  
 ORIGINAL REFERENCE NO.: 118:25239a,25242a  
 TITLE: Sustained-release coated fertilizer granules  
 INVENTOR(S): Hayakawa, Masanori; Miyazawa, Michio; Hayase, Yoshisada; Hotta, Hiroshi; Kondo, Osamu  
 PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan; Shinto Paint Co., Ltd.  
 SOURCE: Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 520456	A1	19921230	EP 1992-110750	19920625
EP 520456	B1	19950830		
R: DE, FR, GB, IT, SE				
JP 05004887	A	19930114	JP 1991-154730	19910626
JP 07072114	B	19950802		
US 5310785	A	19940510	US 1992-902728	19920623
NO 9202507	A	19921228	NO 1992-2507	19920625
NO 179901	B	19960930		
NO 179901	C	19970108		

PRIORITY APPLN. INFO.: JP 1991-154730 A 19910626

AB Fertilizer granules are coated for sustained release with a composition comprising an oil-modified alkyd resin and an unsatd. oil containing a conjugated double bond. A metal soap may also be present. Unlike in conventional methods, no organic solvents are used. A coating composition comprised soybean oil-modified alkyd resin 30, tung oil 49, conjugated linoleic acid pentaerythritol ester 15, Zr octylate 1.2, Co octylate 1.2, Mn naphthenate 0.6, and antiskinning agent 2.0% by weight The coating composition was sprayed upon heated, fluidized urea granules.

=> s soybean (s) transesterification (s) isomerization and (linoleic (3w) ester)  
 L4 1 SOYBEAN (S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLEIC (3W) ESTER)

=> d l4 ibib abs

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:673080 CAPLUS  
 DOCUMENT NUMBER: 143:159467  
 TITLE: Production and purification of esters of conjugated linoleic acids  
 INVENTOR(S): Rongione, Joseph C.; Galante, Jenifer Heydinger; Claude, Steven L.; Bernhardt, Randal J.; Xayariboun, Phouvieng  
 PATENT ASSIGNEE(S): Stepan Company, USA  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE			
WO 2005067888	A1	20050728	WO 2003-US41289	20031223			
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW						
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG						
CA 2550100	A1	20050728	CA 2003-2550100	20031223			
AU 2003299920	A1	20050803	AU 2003-299920	20031223			
EP 1696873	A1	20060906	EP 2003-800190	20031223			
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK						
BR 2003018676	A	20061128	BR 2003-18676	20031223			
NO 2006002762	A	20060629	NO 2006-2762	20060613			
US 20070191619	A1	20070816	US 2007-581374	20070312			
PRIORITY APPLN. INFO.:			WO 2003-US41289	W 20031223			
AB	A process to refine esters of conjugated linoleic acids via distillation in a single or multi-pass distillation operation is provided. Thermal rearrangement of conjugated linoleic acid components during distillation is prevented or reduced by the use of a low residence time and/or reduced pressure distillation apparatus. A process to produce refined esters of conjugated linoleic acids is also provided. The process transesterifies a linoleic acid-containing oil to generate an alkyl ester composition which further undergoes isomerization at a temps. typically between about 90-140 °C to form an ester stream containing conjugated linoleic acid esters, which is then distilled to obtain the refined esters of conjugated linoleic acids. The transesterification and isomerization steps can be performed in one reaction vessel without an intervening distillation step. The transesterification and isomerization steps can occur concurrently in a continuous reaction system using a dual reaction zone apparatus. Refined ester compns. produced by the processes and enriched in desirable conjugated linoleic acid isomers are also contemplated. For example, Safflower oil. Me esters were distilled via two passes in a thin film evaporator to reduce the amount of Me palmitate, Me stearate, Me oleate, and increase the percentage of Me linoleate.						
REFERENCE COUNT:	1	THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT					
=> s	(methyl (3w) octadecadienoic) (L) transestrification (L) isomerization						
L5	0 (METHYL (3W) OCTADECADIEINOIC) (L) TRANSESTRIFICATION (L) ISOMERIZATION						
=> s	octadecadienoic (L) transestrification (L) isomerization						
L6	0 OCTADECADIEINOIC (L) TRANSESTRIFICATION (L) ISOMERIZATION						
=> d	his						

(FILE 'HOME' ENTERED AT 13:57:22 ON 02 OCT 2008)

FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUALINE, AQUIRE, BABS, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CERAB, CIN, COMPENDEX, CONFESCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT, GENBANK, INSPEC, INSPHYS, IPA, KOSMET, METADEX, NAPRALERT, ...' ENTERED AT 13:57:33 ON 02 OCT 2008

L1 3 S (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DIS  
L2 1 S (SAFFLOWER (A) OIL (3W) METHYL (A) ESTER) (L) (CONJUGATED (2W  
L3 2 S SOYBEAN (A) OIL (L) CONJUGATED (A) LINOLEIC (4W) ESTER  
L4 1 S SOYBEAN (S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLE  
L5 0 S (METHYL (3W) OCTADECADIENOIC) (L) TRANSESTRIFICATION (L) ISOM  
L6 0 S OCTADECADIENOIC (L) TRANSESTRIFICATION (L) ISOMERIZATION

=> s ((soy (a) bean) (a) oil) transester? and linoleic  
MISSING OPERATOR OIL) TRANSESTER?  
The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> s ((soy 9a) bean) (a) oil) (L) transester? and linoleic  
MISSING OPERATOR 9A) BEAN  
The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> s ((soy (a) bean) (a) oil) (L) transester? and linoleic  
L7 11 ((SOY (A) BEAN) (A) OIL) (L) TRANSESTER? AND LINOLEIC

=> d 17 1-11 ibib abs

L7 ANSWER 1 OF 11 ANABSTR COPYRIGHT 2008 RSC on STN  
AB The migration of epoxidized soy bean oil  
(ESBO) from the gasket in the lids of glass jars into foods, particularly  
those rich in edible oil, often far exceeds the legal limit (60 mg/kg).  
ESBO was determined through a methyl ester isomer of diepoxy  
linoleic acid. Transesterification occurred directly in  
the homogenized food. From the extracted methyl esters, the diepoxy  
components were isolated by normal-phase LC and transferred online to gas  
chromatography with flame ionization detection using the on-column  
interface in the concurrent solvent evaporation mode. The method involves  
verification elements to ensure the reliability of the results for every  
sample analyzed. The detection limit is 2-5 mg/kg, depending on the food.  
Uncertainty of the procedure is below 10%.

L7 ANSWER 2 OF 11 CABA COPYRIGHT 2008 CABI on STN  
ACCESSION NUMBER: 2005:168979 CABA  
DOCUMENT NUMBER: 20053162017  
TITLE: Epoxidized soy bean oil (ESBO) migrating from the  
gaskets of lids into food packed in glass jars  
AUTHOR: Fankhauser-Noti, A.; Fiselier, K.; Biedermann, S.;  
Biedermann, M.; Grob, K.; Armellini, F.; Rieger, K.;  
Skjevrak, I.  
CORPORATE SOURCE: Official Food Control Authority of the Canton of  
Zurich, P.O. Box, CH-8030 Zurich, Switzerland.  
Konrad.Grob@klzh.ch  
SOURCE: European Food Research and Technology, (2005) Vol.  
221, No. 3/4, pp. 416-422. 21 ref.  
Publisher: Springer-Verlag GmbH. Berlin  
ISSN: 1438-2377

URL: <http://springerlink.metapress.com/link.asp?id=100491>

PUB. COUNTRY: Germany, Federal Republic of  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 3 Nov 2005  
Last Updated on STN: 3 Nov 2005

AB Epoxidized soy bean oil (ESBO) was determined in foods packed in glass jars closed by lids with a poly(vinyl chloride) (PVC) gasket. The methyl ester of a diepoxy linoleic acid isomer was measured, using transesterification directly in the homogenized food and on-line HPLC-GC-FID analysis. Infant foods from the Swiss market consisting of vegetables, potato and rice or muesli with fruits and berries contained less than 7 mg/kg ESBO, but meat (its fat?) strongly increased ESBO migration up to 86 mg/kg. Some 12% of the products exceeded 15 mg/kg. Austrian and Norwegian samples gave similar results. Edible oil strongly extracts the ESBO from the gasket in food contact within a few weeks. Since this part of the gasket on average contained 91 mg ESBO, the legal limit is likely to be far exceeded whenever the food contains free oil contacting the gasket, such as oily sauces or vegetables and fish in oil. In fact, the mean ESBO concentration in 86 samples was 166 mg/kg, with a maximum of 580 mg/kg.

L7 ANSWER 3 OF 11 CABA COPYRIGHT 2008 CABI on STN

ACCESSION NUMBER: 2005:151792 CABA  
DOCUMENT NUMBER: 20053142256  
TITLE: Epoxidized soy bean oil migrating from the gaskets

of lids into food packed in glass jars: analysis by on-line liquid chromatography-gas chromatography  
AUTHOR: Fankhauser-Noti, A.; Fiselier, K.; Biedermann-Brem, S.; Grob, K.

CORPORATE SOURCE: Official Food Control Authority of the Canton of Zurich, P.O. Box, CH-8030 Zurich, Switzerland.  
koni@grob.org

SOURCE: Journal of Chromatography, A, (2005) Vol. 1082, No. 2, pp. 214-219. 13 ref.  
Publisher: Elsevier Science Publishers B.V. Physical Sciences and Engineering Division. Amsterdam  
ISSN: 0021-9673

URL: [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6TG8-4GFCPPW-5&\\_user=3891418&\\_handle=V-WA-A-W-AE-MsSAYZA-UUB-U-AAWYWBVUAW-AAWCYAVYAW-BAZEUUAVU-AE-U&\\_fmt=summary&\\_coverDate=08%2F05%2F2005&\\_rdoc=14&\\_orig=browse&\\_srch=%23toc%235248%232005%23989179997%23600011!&\\_cdi=5248&view=c&\\_acct=C000028398&\\_version=1&\\_urlVersion=0&\\_userid=3891418&md5=596fea2009bcf7edc4a872e61f29813e](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6TG8-4GFCPPW-5&_user=3891418&_handle=V-WA-A-W-AE-MsSAYZA-UUB-U-AAWYWBVUAW-AAWCYAVYAW-BAZEUUAVU-AE-U&_fmt=summary&_coverDate=08%2F05%2F2005&_rdoc=14&_orig=browse&_srch=%23toc%235248%232005%23989179997%23600011!&_cdi=5248&view=c&_acct=C000028398&_version=1&_urlVersion=0&_userid=3891418&md5=596fea2009bcf7edc4a872e61f29813e)

Netherlands Antilles  
PUB. COUNTRY: Netherlands Antilles  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 7 Oct 2005  
Last Updated on STN: 7 Oct 2005

AB The migration of epoxidized soy bean oil (ESBO) from the gasket in the lids of glass jars into foods, particularly those rich in edible oil, often far exceeds the legal limit (60 mg/kg). ESBO was determined through a methyl ester isomer of diepoxy linoleic acid. Transesterification occurred directly in

the homogenized food. From the extracted methyl esters, the diepoxy components were isolated by normal-phase LC and transferred on-line to gas chromatography with flame ionization detection using the on-column interface in the concurrent solvent evaporation mode. The method involves verification elements to ensure the reliability of the results for every sample analyzed. The detection limit is 2-5 mg/kg, depending on the food. Uncertainty of the procedure is below 10%.

L7 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:861730 CAPLUS

TITLE: Epoxidized soy bean oil (ESBO) migrating from the gaskets of lids into food packed in glass jars

AUTHOR(S): Fankhauser-Noti, Anja; Fiselier, Katell; Biedermann, Sandra; Biedermann, Maurus; Grob, Koni; Armellini, Franz; Rieger, Karl; Skjevrak, Ingun

CORPORATE SOURCE: Official Food Control Authority of the Canton of Zurich, Zurich, CH-8030, Switz.

SOURCE: European Food Research and Technology (2005), 221(3-4), 416-422

CODEN: EFRTOF; ISSN: 1438-2377

PUBLISHER: Springer GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Epoxidized soy bean oil (ESBO) was determined in foods packed in glass jars closed by lids with a poly(vinyl chloride) (PVC) gasket. The Me ester of a diepoxy linoleic acid isomer was measured, using transesterification directly in the homogenized food and online HPLC-GC-FID anal. Infant foods from the Swiss market consisting of vegetables, potato and rice or muesli with fruits and berries contained less than 7 mg/kg ESBO, but meat (its fat) strongly increased ESBO migration up to 86 mg/kg. Some 12% of the products exceeded 15 mg/kg. Austrian and Norwegian samples gave similar results. Edible oil strongly exts. the ESBO from the gasket in food contact within a few weeks. Since this part of the gasket on average contained 91 mg ESBO, the legal limit is likely to be far exceeded whenever the food contains free oil contacting the gasket, such as oily sauces or vegetables and fish in oil. In fact, the mean ESBO concentration in 86 samples was 166 mg/kg, with a

maximum of 580 mg/kg.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:583517 CAPLUS

DOCUMENT NUMBER: 143:228185

TITLE: Epoxidized soy bean oil migrating from the gaskets of lids into food packed in glass jars

AUTHOR(S): Fankhauser-Noti, Anja; Fiselier, Katell; Biedermann-Brem, Sandra; Grob, Koni

CORPORATE SOURCE: Official Food Control Authority of the Canton of Zuerich, Zurich, CH-8030, Switz.

SOURCE: Journal of Chromatography, A (2005), 1082(2), 214-219

CODEN: JCRAEY; ISSN: 0021-9673

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The migration of epoxidized soy bean oil

(ESBO) from the gasket in the lids of glass jars into foods, particularly those rich in edible oil, often far exceeds the legal limit (60 mg/kg). ESBO was determined through a Me ester isomer of diepoxy linoleic acid. Transesterification occurred directly in the homogenized food. From the extracted Me esters, the diepoxy components were isolated by normal-phase LC and transferred online to gas chromatog. with flame ionization detection using the on-column interface in the concurrent solvent evaporation mode. The method involves verification elements to ensure the reliability of the results for every sample analyzed. The detection limit is 2-5 mg/kg, depending on the food. Uncertainty of the procedure is below 10%.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:20529 CAPLUS

DOCUMENT NUMBER: 110:20529

ORIGINAL REFERENCE NO.: 110:3441a,3444a

TITLE: Purification of a thermostable, nonspecific lipase

from *Candida* and its use in transesterification

Ishii, Michiyo

INVENTOR(S): Novo Industri A/S, Den.

PATENT ASSIGNEE(S): PCT Int. Appl., 80 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8802775	A1	19880421	WO 1987-DK127	19871016
W: DK, JP, US				
RW: AT, BE, CH,	DE, FR, GB, IT, LU, NL, SE			
EP 287634	A1	19881026	EP 1987-907098	19871016
EP 287634	B1	19950111		
R: AT, BE, CH,	DE, FR, GB, IT, LI, LU, NL, SE			
JP 01501120	T	19890420	JP 1987-506545	19871016
JP 2628667	B2	19970709		
CA 1339844	C	19980428	CA 1987-549667	19871019
DK 8803250	A	19880615	DK 1988-3250	19880615
DK 159882	B	19901224		
DK 159882	C	19910513		
US 5273898	A	19931228	US 1992-962621	19921016
PRIORITY APPLN. INFO.:			DK 1986-4966	A 19861017
			DK 1987-5072	A 19870928
			WO 1987-DK127	W 19871016
			US 1988-206344	B1 19880721

AB A novel thermostable, nonspecific lipase is purified from *Candida* species and characterized. It is used for ester hydrolysis or synthesis and for transesterification, e.g. for randomization of fat in the margarine industry. In a pilot plant production of lipase, *C. antarctica* was cultured for 5 days at 26° in a medium containing yeast extract, Pharmamedia, sucrose, soy bean oil, Pluronic 60L, and salts. The yield was 82 lipase units/mL. The enzyme was purified by filtration, EtOH precipitation, and hydrophobic interaction purification to



provide lipase with specific activity of 143,000 units/g. The pH optimum was .apprx.7 and it was stable up to 84°. This enzyme was further purified to provide 2 lipases with different substrate specificities. The lipase mixture was immobilized on Lewatit E 2001/85 nonionic resin and used to catalyze transesterification of palm oil mid fraction and soy bean oil in a continuous process. No deactivation was seen in .apprx.1000 h of operation at 60°.

L7 ANSWER 7 OF 11 COMPENDEX COPYRIGHT 2008 EEI on STN  
 ACCESSION NUMBER: 2005(27):2162 COMPENDEX  
 TITLE: Epoxidized soy bean oil migrating from the gaskets of lids into food packed in glass jars: Analysis by on-line liquid chromatography-gas chromatography.  
 AUTHOR: Fankhauser-Noti, Anja (Official Food Control Authority of the Canton of Zurich, CH-8030 Zurich, Switzerland); Fiselier, Katell; Biedermann-Brem, Sandra; Grob, Koni  
 SOURCE: Journal of Chromatography A v 1082 n 2 Aug 5 2005 2005.p 214-219  
 SOURCE: Journal of Chromatography A v 1082 n 2 Aug 5 2005 2005.p 214-219  
 CODEN: JCRAEY ISSN: 0021-9673  
 PUBLICATION YEAR: 2005  
 DOCUMENT TYPE: Journal  
 TREATMENT CODE: Experimental  
 LANGUAGE: English  
 AN 2005(27):2162 COMPENDEX  
 AB The migration of epoxidized soy bean oil (ESBO) from the gasket in the lids of glass jars into foods, particularly those rich in edible oil, often far exceeds the legal limit (60 mg/kg). ESBO was determined through a methyl ester isomer of diepoxy linoleic acid. Transesterification occurred directly in the homogenized food. From the extracted methyl esters, the diepoxy components were isolated by normal-phase LC and transferred on-line to gas chromatography with flame ionization detection using the on-column interface in the concurrent solvent evaporation mode. The method involves verification elements to ensure the reliability of the results for every sample analyzed. The detection limit is 2-5 mg/kg, depending on the food. Uncertainty of the procedure is below 10%. SCPY 2005 Elsevier B.V. All rights reserved. 13 Refs.

L7 ANSWER 8 OF 11 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED. on STN  
 ACCESSION NUMBER: 2005-0407914 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.  
 TITLE (IN ENGLISH): Epoxidized soy bean oil migrating from the gaskets of lids into food packed in glass jars Analysis by on-line liquid chromatography-gas chromatography  
 AUTHOR: FANKHAUSER-NOTI Anja; FISELIER Katell; BIEDERMANN-BREM Sandra; GROB Koni  
 CORPORATE SOURCE: Official Food Control Authority of the Canton of Zuerich, P.O. Box, 8030 Zuerich, Switzerland  
 SOURCE: Journal of chromatography, (2005), 1082(2), 214-219, 13 refs.  
 ISSN: 0021-9673 CODEN: JOCRAM  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic

COUNTRY: Netherlands  
 LANGUAGE: English  
 AVAILABILITY: INIST-8577A, 354000138542460130  
 AN 2005-0407914 PASCAL  
 CP Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.  
 AB The migration of epoxidized soy bean oil (ESBO) from the gasket in the lids of glass jars into foods, particularly those rich in edible oil, often far exceeds the legal limit (60 mg/kg). ESBO was determined through a methyl ester isomer of diepoxy linoleic acid. Transesterification occurred directly in the homogenized food. From the extracted methyl esters, the diepoxy components were isolated by normal-phase LC and transferred on-line to gas chromatography with flame ionization detection using the on-column interface in the concurrent solvent evaporation mode. The method involves verification elements to ensure the reliability of the results for every sample analyzed. The detection limit is 2-5 mg/kg, depending on the food. Uncertainty of the procedure is below 10%.

L7 ANSWER 9 OF 11 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN

ACCESSION NUMBER: 2005-0385435 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.  
 TITLE (IN ENGLISH): Epoxidized soy bean oil (ESBO) migrating from the gaskets of lids into food packed in glass jars  
 AUTHOR: FANKHAUSER-NOTI Anja; FISELIER Katell; BIEDERMANN Sandra; BIEDERMANN Maurus; GROB Koni; ARMELLINI Franz; RIEGER Karl; SKJEVRAR Ingun  
 CORPORATE SOURCE: Official Food Control Authority of the Canton of Zuerich, P.O. Box, 8030 Zuerich, Switzerland; Institute for food investigation of the State Vorarlberg, Montfortstr. 4, 6901 Bregenz, Austria; Norwegian Food Safety Authority, Kyrkjevegen 332-334, 4325 Sandnes, Norway  
 SOURCE: European food research and technology A., (2005), 221(3-4), 416-422, 21 refs.  
 ISSN: 1438-2377  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: Germany, Federal Republic of  
 LANGUAGE: English  
 AVAILABILITY: INIST-920A, 354000132381350310  
 AN 2005-0385435 PASCAL  
 CP Copyright .COPYRGT. 2005 INIST-CNRS. All rights reserved.  
 AB Epoxidized soy bean oil (ESBO) was determined in foods packed in glass jars closed by lids with a poly(vinyl chloride) (PVC) gasket. The methyl ester of a diepoxy linoleic acid isomer was measured, using transesterification directly in the homogenized food and on-line HPLC-GC-FID analysis. Infant foods from the Swiss market consisting of vegetables, potato and rice or muesli with fruits and berries contained less than 7 mg/kg ESBO, but meat (its fat?) strongly increased ESBO migration up to 86 mg/kg. Some 12% of the products exceeded 15 mg/kg. Austrian and Norwegian samples gave similar results. Edible oil strongly extracts the ESBO from the gasket in food contact within a few weeks. Since this part of the gasket on average contained 91 mg ESBO, the legal limit is likely to be far exceeded whenever the food contains free oil contacting the gasket, such as oily

saucers or vegetables and fish in oil. In fact, the mean ESBO concentration in 86 samples was 166 mg/kg, with a maximum of 580 mg/kg.

L7 ANSWER 10 OF 11 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN  
 ACCESSION NUMBER: 2005:873222 SCISEARCH  
 THE GENUINE ARTICLE: 956PM  
 TITLE: Epoxidized soy bean oil (ESBO) migrating from the gaskets of lids into food packed in glass jars  
 AUTHOR: Fankhauser-Noti A; Fiselier K; Biedermann S; Biedermann M; Grob K (Reprint); Armellini F; Rieger K; Skjevrak I  
 CORPORATE SOURCE: Official Food Control Author Canton Zurich, CH-8030 Zurich, Switzerland (Reprint); Inst Food Invest State Vorarlberg, A-6901 Bregenz, Austria; Norwegian Food Safety Author, N-4325 Sandnes, Norway  
 COUNTRY OF AUTHOR: Switzerland; Austria; Norway  
 SOURCE: EUROPEAN FOOD RESEARCH AND TECHNOLOGY, (AUG 2005) Vol. 221, No. 3-4, pp. 416-422.  
 ISSN: 1438-2377.  
 PUBLISHER: SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013 USA.  
 DOCUMENT TYPE: Article; Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 19  
 ENTRY DATE: Entered STN: 8 Sep 2005  
 Last Updated on STN: 8 Sep 2005  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB Epoxidized soy bean oil (ESBO) was determined in foods packed in glass jars closed by lids with a poly(vinyl chloride) (PVC) gasket. The methyl ester of a diepoxy linoleic acid isomer was measured, using transesterification directly in the homogenized food and on-line HPLC-GC-FID analysis. Infant foods from the Swiss market consisting of vegetables, potato and rice or muesli with fruits and berries contained less than 7 mg/kg ESBO, but meat (its fat?) strongly increased ESBO migration up to 86 mg/kg. Some 12% of the products exceeded 15 mg/kg. Austrian and Norwegian samples gave similar results. Edible oil strongly extracts the ESBO from the gasket in food contact within a few weeks. Since this part of the gasket on average contained 91 mg ESBO, the legal limit is likely to be far exceeded whenever the food contains free oil contacting the gasket, such as oily saucers or vegetables and fish in oil. In fact, the mean ESBO concentration in 86 samples was 166 mg/kg, with a maximum of 580 mg/kg.

L7 ANSWER 11 OF 11 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN  
 ACCESSION NUMBER: 2005:747012 SCISEARCH  
 THE GENUINE ARTICLE: 943QE  
 TITLE: Epoxidized soy bean oil migrating from the gaskets of lids into food packed in glass jars - Analysis by on-line liquid chromatography-gas chromatography  
 AUTHOR: Fankhauser-Noti A; Fiselier K; Biedermann-Brem S; Grob K (Reprint)  
 CORPORATE SOURCE: Official Food Control Author Canton Zurich, POB, CH-8030 Zurich, Switzerland (Reprint); Official Food Control Author Canton Zurich, CH-8030 Zurich, Switzerland  
 COUNTRY OF AUTHOR: Switzerland  
 koni@grob.org

SOURCE: JOURNAL OF CHROMATOGRAPHY A, (5 AUG 2005) Vol. 1082, No. 2, pp. 214-219.  
ISSN: 0021-9673.  
PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.  
DOCUMENT TYPE: Article; Journal  
LANGUAGE: English  
REFERENCE COUNT: 13  
ENTRY DATE: Entered STN: 29 Jul 2005  
Last Updated on STN: 29 Jul 2005  
\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB The migration of epoxidized soy bean oil (ESBO) from the gasket in the lids of glass jars into foods, particularly those rich in edible oil, often far exceeds the legal limit (60 mg/kg). ESBO was determined through a methyl ester isomer of diepoxy linoleic acid. Transesterification occurred directly in the homogenized food. From the extracted methyl esters, the diepoxy components were isolated by normal-phase LC and transferred on-line to gas chromatography with flame ionization detection using the on-column interface in the concurrent solvent evaporation mode. The method involves verification elements to ensure the reliability of the results for every sample analyzed. The detection limit is 2-5 mg/kg, depending on the food. Uncertainty of the procedure is below 10%. (c) 2005 Elsevier B.V. All rights reserved.

=> d his

(FILE 'HOME' ENTERED AT 13:57:22 ON 02 OCT 2008)

FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUALINE, AQUIRE, BABS, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CERAB, CIN, COMPENDX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT, GENBANK, INSPEC, INSPHYS, IPA, KOSMET, METADEX, NAPRALERT, ...' ENTERED AT 13:57:33 ON 02 OCT 2008

L1 3 S (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DIS  
L2 1 S (SAFFLOWER (A) OIL (3W) METHYL (A) ESTER) (L) (CONJUGATED (2W  
L3 2 S SOYBEAN (A) OIL (L) CONJUGATED (A) LINOLEIC (4W) ESTER  
L4 1 S SOYBEAN (S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLE  
L5 0 S (METHYL (3W) OCTADECADIENOIC) (L) TRANSESTRIFICATION (L) ISOM  
L6 0 S OCTADECADIENOIC (L) TRANSESTRIFICATION (L) ISOMERIZATION  
L7 11 S ((SOY (A) BEAN) (A) OIL) (L) TRANSESTER? AND LINOLEIC

=> s (vegetable (2w) oil) (s) transesterification (L) linoleic

39 FILES SEARCHED...

L8 26 (VEGETABLE (2W) OIL) (S) TRANSESTERIFICATION (L) LINOLEIC

=> s prepare (l) linoleic (3w) ester

L9 6 PREPARE (L) LINOLEIC (3W) ESTER

=> s l9 and l8

L10 0 L9 AND L8

=> d l9 1-6 ibib abs

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:482813 CAPLUS

DOCUMENT NUMBER: 143:153651  
 TITLE: Preparation of conjugated vitamin C linoleate  
 INVENTOR(S): Wen, Bin; Wumanjiang, Aili; Dong, Xin  
 PATENT ASSIGNEE(S): Xinjiang Physico-Chemical Technology Inst., Chinese  
 Academy of Sciences, Peop. Rep. China  
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, No pp.  
 given  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1528755	A	20040915	CN 2003-10100510	20031008
PRIORITY APPLN. INFO.:			CN 2003-10100510	20031008

OTHER SOURCE(S): CASREACT 143:153651

AB The invention relates to a method to prepare conjugated linoleic acid vitamin C ester, using phosphorus trichloride as reagent and using phosphorous acid produced in the acyl chlorination course as acid reagent. It is used as additive of health food and skin care cosmetics.

L9 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:394442 CAPLUS

DOCUMENT NUMBER: 133:135132

TITLE: Transition-metal trifluoromethane-sulfonates - recyclable catalysts for the synthesis of branched fatty derivatives by Diels-Alder reactions at unsaturated fatty esters  
 AUTHOR(S): Behr, Arno; Fiene, Martin; Naendrup, Franz; Schurmann, Klaus  
 CORPORATE SOURCE: Department of Chemical Engineering, University of Dortmund, Dortmund, 44227, Germany  
 SOURCE: European Journal of Lipid Science and Technology (2000), 102(5), 342-350  
 CODEN: EJLTFM; ISSN: 1438-7697

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Diels-Alder reactions of conjugated linoleic acid Et ester (1) with different quinones and with a variety of  $\alpha/\beta$ -unsatd. aldehydes and ketones are described in this paper. Using Sc(OTf)<sub>3</sub> or Cu(OTf)<sub>2</sub> as catalysts the reactions can be carried out at 25-40°C with good yields. For the first time in oleochem. it is possible to prepare Diels-Alder cycloaddns. with catalyst concns. of 10 mol-% instead of stoichiometric amts. of Lewis acids. Furthermore, the reaction time was shortened drastically. The catalyst Sc(OTf)<sub>3</sub> can be removed by a simple extraction of the organic layer with water. After evaporation of the aqueous phase to dryness the catalyst can be reused without loss of yield.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:72912 CAPLUS

DOCUMENT NUMBER: 90:72912  
 ORIGINAL REFERENCE NO.: 90:11553a,11556a  
 TITLE: Resin compositions for moldings  
 INVENTOR(S): Numata, Shunichi; Yokono, Hitoshi  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 53123457	A	19781027	JP 1977-38129	19770405
JP 60010533	B	19850318		

PRIORITY APPLN. INFO.: JP 1977-38129 A 19770405

AB Moldings having good distribution of fillers were prepared from 1 equiv epoxy containing 10-80% linoleic acid dimer diglycidyl ester (I, a plasticizing agent), 1.5-5 equiv diphenylmethane diisocyanate (II), and 40-65 volume% fillers such as powdered molten quartz or silica having particle size <80  $\mu$ . Thus, a bisphenol A-type epoxy resin 70, I 30, II 150, 2-phenylimidazole 0.5, and powdered molten quartz 460 g were mixed at 80° and cured at 110° for 5 h and 180° for 15 h to prepare a molding.

L9 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2008 ACS on SIN

ACCESSION NUMBER: 1976:434047 CAPLUS  
 DOCUMENT NUMBER: 85:34047  
 ORIGINAL REFERENCE NO.: 85:5525a,5528a  
 TITLE: Heat-hardenable resin composition  
 INVENTOR(S): Numata, Shunichi; Yokono, Hitoshi; Mukai, Junji  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Ger. Offen., 39 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2545106	A1	19760415	DE 1975-2545106	19751008
DE 2545106	B2	19770616		
JP 51042798	A	19760412	JP 1974-116105	19741011
JP 57027894	B	19820614		
CH 622276	A5	19810331	CH 1975-13098	19751009

PRIORITY APPLN. INFO.: JP 1974-116105 A 19741011

AB Polyfunctional epoxy compds. containing 10-80% glycidyl ester of polycarboxylic acids were used with a diisocyanate and a hardening catalyst to prepare heat-hardened resins with good thermal shock resistance. Thus, a mixture of DER 332 (bisphenol A epoxy resin) [25085-99-8] 50, linoleic acid dimer diglycidyl ester (EP 871) [58856-69-2] 50, diisocyanatodiphenylmethane (Sumidur CD) [26447-40-5] 166, and 2-heptadecylimidazole 1.3 g was hardened 5, 8, and 15 hr, resp., at 110, 140, and 180° to prepare a resin which resisted cracking during thermal cycling to -40°.

L9 ANSWER 5 OF 6 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED. on  
STN

ACCESSION NUMBER: 2000-0324816 PASCAL  
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.  
TITLE (IN ENGLISH): Transition-metal trifluoromethane-sulphonates : recyclable catalysts for the synthesis of branched fatty derivatives by Diels-Alder reactions at unsaturated fatty esters  
AUTHOR: BEHR A.; FIENE M.; NAENDRUP F.; SCHUERMANN K.  
CORPORATE SOURCE: University of Dortmund, Department of Chemical Engineering, Dortmund, Germany, Federal Republic of; SPIN UP, Lünen, Germany, Federal Republic of  
SOURCE: European journal of lipid science and technology, (2000), 102(5), 342-350, 32 refs.  
ISSN: 1438-7697  
DOCUMENT TYPE: Journal; (research paper)  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: Germany, Federal Republic of  
LANGUAGE: English  
AVAILABILITY: INIST-356, 354000088934310040

AN 2000-0324816 PASCAL  
CP Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.  
AB Diels-Alder reactions of conjugated linoleic acid ethyl ester (1) with different quinones and with a variety of  $\alpha/\beta$ -unsaturated aldehydes and ketones are described in this paper. Using Sc(OTf).sub.3 or Cu(OTf).sub.2 as catalysts the reactions can be carried out at 25-40 °C with good yields. For the first time in oleochemistry it is possible to prepare Diels-Alder cycloadditions with catalyst concentrations of 10 mol-% instead of stoichiometric amounts of Lewis acids. Furthermore, the reaction time was partly shortened drastically. The catalyst Sc(OTf).sub.3 can be removed by a simple extraction of the organic layer with water. After evaporation of the aqueous phase to dryness the catalyst can be reused without loss of yield.

L9 ANSWER 6 OF 6 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on  
STN

ACCESSION NUMBER: 2000:704444 SCISEARCH  
THE GENUINE ARTICLE: 353EF  
TITLE: Transition-metal trifluoromethane-sulphonates - recyclable catalysts for the synthesis of branched fatty derivatives by Diels-Alder reactions at unsaturated fatty esters  
AUTHOR: Behr A (Reprint); Fiene M; Naendrup F; Schurmann K  
CORPORATE SOURCE: Univ Dortmund, Chair Proc Dev, Dept Chem Engrn, Emil Figge Str 66, D-44227 Dortmund, Germany (Reprint); Univ Dortmund, Chair Proc Dev, Dept Chem Engrn, D-44227 Dortmund, Germany; SPIN UP, Lünen, Germany  
COUNTRY OF AUTHOR: Germany  
SOURCE: EUROPEAN JOURNAL OF LIPID SCIENCE AND TECHNOLOGY, (MAY 2000) Vol. 102, No. 5, pp. 342-350.  
ISSN: 1438-7697.  
PUBLISHER: WILEY-V C H VERLAG GMBH, PO BOX 10 11 61, D-69451 BERLIN, GERMANY.  
DOCUMENT TYPE: Article; Journal  
LANGUAGE: English

REFERENCE COUNT: 32  
 ENTRY DATE: Entered STN: 2000  
 Last Updated on STN: 2000  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB Diels-Alder reactions of conjugated linoleic acid ethyl ester (1) with different quinones and with a variety of alpha/beta-unsaturated aldehydes and ketones are described in this paper. Using Sc(OTf)(3) or Cu(OTf)(2) as catalysts the reactions can be carried out at 25-40 degrees C with good yields. For the first time in oleochemistry it is possible to prepare Diels-Alder cycloadditions with catalyst concentrations of 10 mol-% instead of stoichiometric amounts of Lewis acids. Furthermore, the reaction time was partly shortened drastically. The catalyst Sc(OTf)(3) can be removed by a simple extraction of the organic layer with water. After evaporation of the aqueous phase to dryness the catalyst can be reused without loss of yield.

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(FILE 'HOME' ENTERED AT 13:57:22 ON 02 OCT 2008)

FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUALINE, AQUIRE, BABS, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CERAB, CIN, COMPENDEX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT, GENBANK, INSPEC, INSPHYS, IPA, KOSMET, METADEX, NAPRALERT, ...' ENTERED AT 13:57:33 ON 02 OCT 2008

L1 3 S (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DIS  
 L2 1 S (SAFFLOWER (A) OIL (3W) METHYL (A) ESTER) (L) (CONJUGATED (2W  
 L3 2 S SOYBEAN (A) OIL (L) CONJUGATED (A) LINOLEIC (4W) ESTER  
 L4 1 S SOYBEAN (3S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLE  
 L5 0 S (METHYL (3W) OCTADECADIENOIC) (L) TRANSESTRIFICATION (L) ISOM  
 L6 0 S OCTADECADIENOIC (L) TRANSESTRIFICATION (L) ISOMERIZATION  
 L7 11 S ((SOY (A) BEAN) (A) OIL) (L) TRANSESTER? AND LINOLEIC  
 L8 26 S (VEGETABLE (2W) OIL) (S) TRANSESTERIFICATION (L) LINOLEIC  
 L9 6 S PREPARE (L) LINOLEIC (3W) ESTER  
 L10 0 S L9 AND L8

=> d l8 1-9 ibib abs

L8 ANSWER 1 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 2008:76495 CABA  
 DOCUMENT NUMBER: 20083065573  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel  
 AUTHOR: Baptista, P.; Felizardo, P.; Menezes, J. C.; Correia, M. J. N.  
 CORPORATE SOURCE: Centre of Chemical Processes, IST, Technical University of Lisbon, Av. Rovisco Pais, 1049-001 Lisbon, Portugal. qjnc@ist.utl.pt  
 SOURCE: Analytica Chimica Acta, (2008) Vol. 607, No. 2, pp. 153-159. 32 ref.  
 Publisher: Elsevier. Amsterdam  
 ISSN: 0003-2670  
 URI: [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6TF4-4R8HHTB-3&\\_user=6686535&\\_coverDate=01%2F28%2F2008&\\_rdoc=7&\\_f](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6TF4-4R8HHTB-3&_user=6686535&_coverDate=01%2F28%2F2008&_rdoc=7&_f)



mt=summary&\_orig=browse&\_srch=doc-  
info(%23toc%235216%232008%23993929997%23678118%23FLA  
%23display%23Volume)&\_cdi=5216&\_sort=d&\_docanchor=&\_  
ct=15&\_acct=C000066028&\_version=1&\_urlVersion=0&\_use  
rid=6686535&md5=5c06eee83bda3655f567f3e39fc17645

PUB. COUNTRY: Netherlands Antilles  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 4 Apr 2008  
Last Updated on STN: 4 Apr 2008

AB Biodiesel is the main alternative to fossil diesel. The key advantages of its use are the fact that it is a non-toxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemically, biodiesel is a mixture of fatty acid methyl esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alcohol, in the presence of a catalyst. The European Standard (EN 14214) establishes 25 parameters that have to be analysed to certify biodiesel quality and the analytical methods that should be used to determine those properties. This work reports the use of near infrared (NIR) spectroscopy to determine the esters content in biodiesel as well as the content in linolenic acid methyl esters (C18:3) in industrial and laboratory-scale biodiesel samples. Furthermore, calibration models for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1), linoleic (C18:2) acid methyl esters were also obtained. Principal component analysis was used for the qualitative analysis of the spectra, while partial least squares regression was used to develop the calibration models between analytical and spectral data. The results confirm that NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess the biodiesel quality control in both laboratory-scale and industrial scale samples.

L8 ANSWER 2 OF 26 CABA COPYRIGHT 2008 CABI on STN  
ACCESSION NUMBER: 2006:175881 CABA  
DOCUMENT NUMBER: 20063153772  
TITLE: Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil  
AUTHOR: Matulka, R. A.; Noguchi, O.; Nosaka, N.  
CORPORATE SOURCE: Burdock Group, 2001 9th Avenue, Vero Beach, FL 32960, USA. rmatulka@burdockgroup.com  
SOURCE: Food and Chemical Toxicology, (2006) Vol. 44, No. 9, pp. 1530-1538. 30 ref.  
Publisher: Elsevier. Oxford  
ISSN: 0278-6915  
URL: <http://www.sciencedirect.com/science/journal/02786915>  
DOI: 10.1016/j.fct.2006.04.004  
PUB. COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ENTRY DATE: Entered STN: 3 Nov 2006  
Last Updated on STN: 3 Nov 2006

AB To reduce the incorporation of dietary lipids into adipose tissue, modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable

oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technological disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT). This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymatically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approximate fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approximate percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) acute study in rats (LD50>5000 mg/kg); (2) 6 week repeat-dose safety study via dietary administration to rats (NOAEL of 3500 mg/kg/day), (3) in vitro genotoxicity studies using *Salmonella typhimurium* and *Escherichia coli* (negative at 5000 mg/plate), and (4) a four-week, placebo-controlled, double blind, human clinical trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs.

L8 ANSWER 3 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 95:127362 CABA  
 DOCUMENT NUMBER: 19951407720  
 TITLE: Estimation of conjugated octadecatrienes in edible fats and oils  
 AUTHOR: Yurawecz, M. P.; Molina, A. A.; Mossoba, M.; Ku, Y.  
 CORPORATE SOURCE: USDA, Center for Food Safety and Applied Nutrition, Washington, D.C. 20204, USA.  
 SOURCE: Journal of the American Oil Chemists' Society, (1993) Vol. 70, No. 11, pp. 1093-1099. 19 ref. ISSN: 0003-021X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 24 Jul 1995  
 Last Updated on STN: 24 Jul 1995  
 AB Interest in conjugated-diene fatty acids in foods has recently been increased by discovery of their antioxidant and anticarcinogenic properties. Conjugated octadecatrienes (COTs), members of another group of fatty acids, are also present in foods. COTs are formed during the processing of vegetable oils as the result of the dehydration of secondary oxidation products of linoleic acid. Little information is available concerning the occurrence and nutritional properties of COTs in edible oils. Levels of COTs, determined in 27 vegetable oils by ultraviolet (UV) spectroscopy, ranged from not detected (<0.001) to 0.2%. Determination of COTs by gas

chromatography of the methyl esters, obtained by transesterification at room temperature with sodium methoxide/methanol, gave lower levels (not detected, 0.051%) than did determination by UV spectroscopy. Methylation with boron trifluoride produced COIs from naturally occurring moieties in the oils and, therefore, is not recommended.

L8 ANSWER 4 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 93:98617 CABA  
 DOCUMENT NUMBER: 19930460890  
 TITLE: Fat technology - conversion of milk fat  
 Teknologier inden for fedtomradet - omformning af mælkfedt  
 Jart, A.  
 AUTHOR: Mejeri- og Levnedsmiddelinstituttet, Den Kgl.  
 CORPORATE SOURCE: Veterinaer- og Landbohøjskole, Copenhagen, Denmark.  
 SOURCE: Meieriposten, (1991) Vol. 80, No. 6, Meieriteknikk  
 2, pp. 7-10.  
 ISSN: 0025-8776  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Danish  
 ENTRY DATE: Entered STN: 1 Nov 1994  
 Last Updated on STN: 1 Nov 1994

AB Chemical conversion of fatty acids or triglycerides is examined. The hydrogenation process, treatment of milk fat with Se catalyst and introduction of double bonds into milk fat, chemically or, in particular, enzymically, are considered. Transesterification of milk fat, especially with a vegetable oil, e.g. sunflower oil, to achieve increased linoleic acid content and softer consistency is discussed. Addition of a long-chain fatty acid methylester is also possible. Equipment layouts are shown. Physical conversion of milk fat can be achieved simply by blending with one or more other fat substances. Suitability of 5 different methods of triglyceride fractionation, using pure milk fat or a blended product, is assessed.

L8 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:52276 CAPLUS  
 DOCUMENT NUMBER: 148:334857  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel  
 Baptista, Patricia; Felizardo, Pedro; Menezes, Jose C.; Correia, M. Joana Neiva  
 AUTHOR(S): Centre of Chemical Processes, IST, Technical  
 CORPORATE SOURCE: University of Lisbon, Lisbon, 1049-001, Port.  
 SOURCE: Analytica Chimica Acta (2008), 607(2), 153-159  
 CODEN: ACACAM; ISSN: 0003-2670  
 PUBLISHER: Elsevier B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Biodiesel is the main alternative to fossil diesel. The advantages of its use are the fact that it is a nontoxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemical, biodiesel is a mixture of fatty acid Me esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react

with an alc., in the presence of a catalyst. The European Standard EN 14214 establishes 25 parameters that have to be analyzed to certify biodiesel quality and the anal. methods that should be used to determine those properties. This work reports the use of NIR spectroscopy to determine the ester content in biodiesel as well as the content of linolenic acid Me esters (C18:3) in industrial and laboratory-scale biodiesel samples. Calibration data for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1) and linoleic (C18:2) acid Me esters were also obtained. Principal component anal. was used for the qual. anal. of the spectra, while partial least squares regression was used to develop the calibration models between anal. and spectral data. NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess biodiesel quality in both laboratory and industrial samples.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:675714 CAPLUS  
 DOCUMENT NUMBER: 147:166528  
 TITLE: Method for preparation of polyunsaturated fatty acid plant sterol ester  
 INVENTOR(S): Xu, Xinde; Shao, Bin; Lu, Liangwei; Zhao, Quanjian; Yu, Yehong  
 PATENT ASSIGNEE(S): Zhejiang Medicine Co., Ltd. Xinchang Pharmaceutical Factory, Peop. Rep. China  
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 9pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1982326	A	20070620	CN 2005-10062012	20051213
PRIORITY APPLN. INFO.:			CN 2005-10062012	20051213

AB The method comprises: (1) alcoholysis of triglycerides from vegetable oil in methanol and catalyst to obtain fatty acid Me ester; (2) transesterification of the obtained fatty acid Me ester with plant sterol in the presence of catalyst (C1-C5 sodium alcoholate) to give crude polyunsatd. fatty acid plant sterol ester; (3) decolorization, deodorization to provide refined polyunsatd. fatty acid plant sterol ester. The above vegetable oil is corn oil, soybean oil, sunflower seed oil or cottonseed oil, with linoleic acid content > 60%, oleic acid content > 20% and unsatd. fatty acid > 80% in total fatty acid. In step (1), the amount of methanol is 0.3-3 times triglyceride and catalyst is 0.8-5% of triglyceride weight; catalyst is toluene sulfonic acid, concentrated sulfuric acid, sodium hydrogen carbonate, diethylamine, triethylamine or C1-C5 sodium alcoholate. The above plant sterol is composed of  $\beta$ -sitosterol 40-60, brassicasterol 15-30, campesterol 15-30 and stigmasterol 0-20%. The decolorizing agent in step (3) is active argil, diatomite and/or activated carbon. The method is suitable for food production due to no employment of harmful organic solvent, and can realize mass production due to simple production process and low reaction requirement.

L8 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:679133 CAPLUS  
 DOCUMENT NUMBER: 145:270468  
 TITLE: Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil  
 AUTHOR(S): Matulka, R. A.; Noguchi, O.; Nosaka, N.  
 CORPORATE SOURCE: Burdock Group, Vero Beach, FL, 32960, USA  
 SOURCE: Food and Chemical Toxicology (2006), 44(9), 1530-1538  
 CODEN: FCTOD7; ISSN: 0278-6915  
 PUBLISHER: Elsevier Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB To reduce the incorporation of dietary lipids into adipose tissue, modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technol. disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT). This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approx. fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approx. percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) Acute study in rats (LD50 > 5000 mg/kg); (2) 6 Wk repeat-dose safety study via dietary administration to rats (NOEL of 3500 mg/kg/day); (3) In vitro genotoxicity studies using Salmonella typhimurium and Escherichia coli (neg. at 5000 mg/plate), and. (4) A four-week, placebo-controlled, double blind, human clin. trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2005:844263 CAPLUS  
 DOCUMENT NUMBER: 144:236172  
 TITLE: Correlation between fatty acid composition and cold filter plugging point of biodiesels  
 AUTHOR(S): Hancok, J.; Kovacs, F.; Krar, M.; Magyar, S.; Recseg, K.; Czuppon, T.  
 CORPORATE SOURCE: University of Veszprem, Veszprem, H-8201, Hung.

SOURCE: Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry (2005), 50(2), 793-796  
 CODEN: PSADEF; ISSN: 1521-4648

PUBLISHER: American Chemical Society, Division of Fuel Chemistry

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

AB A range of vegetable oils (from the standard rape seed oil to used frying oil) was studied as a potential source for biodiesel production. Among the biodiesel samples, produced with the transesterification of various vegetable oils (with MeOH/Na methoxide mixture), rape oil-derived biodiesel fulfills the requirements of the valid European standard (EN 14214). As a result of the higher oleic acid and lower linoleic acid content, it has better oxidation stability than the other products. In the rape oil-derived biodiesel, the concentration of C18:0 is lower and that of C22:0 is only 0.3%, resulting in a preferable cold filter plugging point (CFPP) value. A relatively good compromise between the oxidation stability, the CFPP value and the unsatd. fatty acid content was observed. In addition, approx. linear correlation is obtained by plotting the CFPP values vs. the ratio of total unsatd. fatty acids to saturated fatty acids.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:859415 CAPLUS

DOCUMENT NUMBER: 139:339267

TITLE: Processes for transesterification, esterification, interesterification by dielectric heating

INVENTOR(S): Charlier De Chily, Pierre; Raynard, Mikaele

PATENT ASSIGNEE(S): Satie Sa, Fr.

SOURCE: Fr. Demande, 39 pp.  
 CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2839069	A1	20031031	FR 2002-5396	20020425
FR 2839069	B1	20060407		
WO 2003090669	A2	20031106	WO 2003-FR1307	20030424
WO 2003090669	A3	20040401		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003262827	A1	20031110	AU 2003-262827	20030424
EP 1501783	A2	20050202	EP 2003-740664	20030424
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 PRIORITY APPLN. INFO.: FR 2002-5396 A 20020425  
 WO 2003-FR1307 W 20030424

AB These processes not only make it possible to decrease the reaction times, compared with the traditional processes, and they also lead to esters with remarkable physicochem. characteristics: these processes make it possible to significantly reduce the acid value and the peroxide index of the mixture. This present invention consists in manufacturing by dielec. heating (microwaves and high frequencies) of polyols partially or completely esterified starting from a mixture of (A) vegetable or animal oils or fats, fatty acids, fatty acid esters, hydrocarbons or derivs. of these latter and compds. and (B) compds. containing or generating OH groups, like glycerol, polyglycerols, polyalkylene glycols polyvinyl alcs., sugars, and sterols. The heat treatment is carried out by dielec. heating, preferably in an atmospheric deprived of oxygen. The frequencies of the electromagnetic waves vary from 3 Mhz to 30 GHz. The esters find multiple applications: the esters of polymeric alcs. are for example the surfactants used in cosmetics or in foods.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 18 10-19 ibib abs

L8 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:531030 CAPLUS

DOCUMENT NUMBER: 139:229589

TITLE: Characterization of lipase-catalyzed structured lipids from selected vegetable oils with conjugated linoleic acid: Their oxidative stability with rosemary extracts  
 AUTHOR(S): Lee, J.-H.; Kim, M. R.; Kim, H.-R.; Kim, I.-H.; Lee, K.-T.

CORPORATE SOURCE: Dept. of Food and Nutrition, Chungnam Natl. Univ., Taejeon, S. Korea

SOURCE: Journal of Food Science (2003), 68(5), 1653-1658  
 CODEN: JFDSA; ISSN: 0022-1147

PUBLISHER: Institute of Food Technologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Response surface methodol. was used to optimize the lipase-catalyzed transesterification reaction between conjugated linoleic acid (CLA) and soybean oil. On the basis of the model, structured lipids (SLs) were synthesized from CLA and soybean oil or sunflower oil. CLA was incorporated in SL-soybean (24.4 mol%) and SL-sunflower (23.1 mol%), resp. Isomerization to trans, trans CLA was observed during the reaction. Throughout the oxidation study, all SLs showed higher peroxide values (POVs),  $\rho$ -anisidine values, and 2-thiobarbituric acid-reactive substance values than their counterparts. Rosemary exts. with a different amount (100 to 300 ppm) could effectively reduce oxidation in soybean oil, sunflower oil, and their SLs.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:527098 CAPLUS

DOCUMENT NUMBER: 138:92642

TITLE: Biodiesel from vegetable oils via transesterification

in supercritical methanol  
 AUTHOR(S): Demirbas, Ayhan  
 CORPORATE SOURCE: Department of Chemical Education, Karadeniz Technical University, Trabzon, 61035, Turk.  
 SOURCE: Energy Conversion and Management (2002), 43(17), 2349-2356  
 CODEN: ECMADL; ISSN: 0196-8904  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Transesterifications of six vegetable oil samples in supercrit. methanol were studied without using any catalyst. Me esters of vegetable oils have several outstanding advantages among other new-renewable and clean engine fuel alternatives. The variables affecting the Me ester yield during the transesterification reaction, such as molar ratio of alc. to vegetable oil and reaction temperature, were studied. Compared to number 2 Diesel fuel, all of the vegetable oils are much more viscous, while the Me esters of vegetable oils (biodiesels) are slightly more viscous.  
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L8 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:107295 CAPLUS  
 DOCUMENT NUMBER: 136:153747  
 TITLE: Transesterified C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids  
 INVENTOR(S): Mosier, Benjamin; Duffy, Bryn J.  
 PATENT ASSIGNEE(S): MJ Research & Development, L.P., USA  
 SOURCE: PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010114	A2	20020207	WO 2001-US24369	20010802
WO 2002010114	A3	20020815		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2418066	A1	20020207	CA 2001-2418066	20010802
AU 2001081027	A	20020213	AU 2001-81027	20010802
US 20020017629	A1	20020214	US 2001-921238	20010802
US 7252779	B2	20070807		
EP 1307422	A2	20030507	EP 2001-959474	20010802
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
TW 225858	B	20050101	TW 2001-90118924	20010802



MX 2003PA00964	A	20040217	MX 2003-PA964	20030131
US 20080020956	A1	20080124	US 2007-821689	20070625
PRIORITY APPLN. INFO.:			US 2000-222477P	P 20000802
			US 2001-921238	A1 20010802
			WO 2001-US24369	W 20010802

OTHER SOURCE(S): MARPAT 136:153747

AB A composition, suitable for use as a lubricant, a heat transfer agent, a rheol. modifier, a corrosion inhibitor, or a moisture inhibitor, consists of the reaction products of the acid-catalyzed transesterification of a C8-22-fatty acid ester (preferably a C18-fatty acid ester) with a C1-18-alc., in which the acid portion (typically a phosphate or a sulfate) can be incorporated as the inorg. esters into a portion of the products. The preferred starting esters are derived from ricinoleic acid, oleic acid, linoleic acid, stearic acid, lauric acid, myristic acid, and palmitic acid (including dimerized and trimerized acids), especially when present in a vegetable oil (preferably castor oil (containing >80% ricinoleic acid esters)). Transesterification of castor oil with n-propanol in the presence of minor amts. of phosphoric acid yielded Pr ricinoleate, glycerol mono-, di-, and triricinoleates, glycerin, propanol, and various phosphate esters of the hydroxyacid reaction products. When used as a lubricant can contain an added miscibility-enhancement additive (e.g., C10-18-alc., esters, etc.), to increase miscibility with other fluids (e.g., naphthenes, paraffins, polyol esters, polyalkylene glycols, etc.).

L8 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:59044 CAPLUS

DOCUMENT NUMBER: 136:249953

TITLE: Biodiesel Fuels from Vegetable Oils:  
Transesterification of Cynara cardunculus L. Oils with  
Ethanol

AUTHOR(S): Encinar, J. M.; Gonzalez, J. F.; Rodriguez, J. J.;  
Tejedor, A.

CORPORATE SOURCE: Departamento de Ingenieria Quimica y Energetica,  
Universidad de Extremadura, Badajoz, 06071, Spain

SOURCE: Energy &amp; Fuels (2002), 16(2), 443-450

CODEN: ENFUEM; ISSN: 0887-0624

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A study was made of the transesterification reaction of Cynara cardunculus L. oil by ethanol, using sodium hydroxide and potassium hydroxide as catalysts. The objective of the work was to characterize the Et esters for use as biodiesel in compression ignition motors. The operation variables employed were temperature (25-75°), catalyst type (sodium hydroxide and potassium hydroxide), catalyst concentration (0.25-1.5%), and ethanol/oil molar ratio (3:1-15:1). Oil mass (200 g), reaction time (120 min), and alc. type (ethanol) were fixed as common parameters in all the expts. The evolution of the process was followed by gas chromatog., determining

the concentration of the Et esters at different reaction times. The biodiesel was characterized by determining its d., viscosity, high heating value, cetane index, cloud and pour points, characteristics of distillation, and flash and combustion points according to ISO norms. The biodiesel with the best properties was obtained using an ethanol/oil molar ratio of 12:1, sodium hydroxide as catalyst (1%) and 75° temperature. This biodiesel has very similar properties to those of number 2 diesel fuel.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS

## RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1996:147279 CAPLUS  
 DOCUMENT NUMBER: 124:230523  
 ORIGINAL REFERENCE NO.: 124:42725a,42728a  
 TITLE: Optimization and scale-up of enzymic synthesis of structured lipids using RSM  
 AUTHOR(S): Huang, Kuan-Hsiang; Akoh, Casimir C.  
 CORPORATE SOURCE: Dept. of Food Science & Technology, The Univ. of Georgia, Athens, GA, 30602-7610, USA  
 SOURCE: Journal of Food Science (1996), 61(1), 137-41  
 CODEN: JFDSA; ISSN: 0022-1147  
 PUBLISHER: Institute of Food Technologists  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Enzymic synthesis of structured lipids by transesterification of Et caprylate (EC) and soybean oil and sunflower oil (90% oleic acid) in hexane was optimized using response surface methodol. (RSM). Incubation time (IT), molar ratio of Et caprylate to total triglycerides (MR), percentage of soybean oil as source of long-chain triglycerides (PS), and long-chain triglyceride concentration (TC) were assumed the most important factors affecting nutritional attributes of structured lipids based on caprylic acid (C8:0) and linoleic acid (C18:2 n-6) content. Optimum conditions for synthesis of structured lipids were: IT = 26.4 h; MR = 8; PS = 75%; TC = 0.58 M. The capryloyl acyl residues in triglyceride predicted by RSM was 67.6 (mol%) and linoleoyl 14.5%. Large scale synthesis was successful. The model was verified exptl.

L8 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1983:142194 CAPLUS  
 DOCUMENT NUMBER: 98:142194  
 ORIGINAL REFERENCE NO.: 98:21643a,21646a  
 TITLE: Margarine fat blend  
 INVENTOR(S): Stratmann, Wilhelm; Vermaas, Leo Frans; Dijkshoorn, Willem  
 PATENT ASSIGNEE(S): Unilever N. V., Neth.; Unilever PLC  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 70050	A1	19830119	EP 1982-200682	19820604
EP 70050	B1	19840919		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 9431	T	19841015	AT 1982-200682	19820604
AU 8284775	A	19821223	AU 1982-84775	19820610
AU 548605	B2	19851219		
US 4425371	A	19840110	US 1982-388353	19820614
ZA 8204171	A	19840125	ZA 1982-4171	19820614
CA 1196527	A1	19851112	CA 1982-405065	19820614
JP 58013350	A	19830125	JP 1982-102932	19820615
JP 03052941	B	19910813		

## PRIORITY APPLN. INFO.:

GB 1981-18354 A 19810615  
 EP 1982-200682 A 19820604

AB A spreadable margarine-fat blend which melts at body temperature is produced from vegetable oil by a process comprising (1) transesterification at 25-175°, using as catalyst alkali metals, their alloys, their hydroxyides or alkoxides (0.01-0.5 weight%), of a mixture of an oil with ≥20% linoleic acid (45-75 weight%) and an oil with ≥80% fatty acids which are saturate and have a chain length of ≥16 C atoms (25-5 weight%), (2) fractionation to obtain the liquid (olein) fraction; the solid (stearin) fraction is separated for reuse, (3) mixing 50-90% of the olein fraction with 10-50 weight% of an oil with ≥40% linoleic acid, and (4) processing by working and cooling. The product has a high proportion of unsat. fatty acids, good organoleptic properties, melts in the mouth, and has a low trans-fatty acid level (≤15%). Thus, a mixture of sunflower oil (60%) and sunflower oil hydrogenated to a m.p. of 69° (40%) was vacuum-dried and transesterified at 120° for 20 min in the presence of NaOC2H5 [141-52-6] (0.12 weight%), dry-fractionated at 35° in a pelletizer, and a margarine-fat blend prepared by mixing 20 parts sunflower oil with 80 parts of the olein. The blend (84 weight%) was mixed with an aqueous phase (16 weight%) and processed through Votator unit. The stearin was recirculated by substitution for part of the hydrogenated oil to be transesterified.

L8 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:591532 CAPLUS

DOCUMENT NUMBER: 91:191532

ORIGINAL REFERENCE NO.: 91:30839a,30842a

TITLE: Exchange of fatty acid component of some edible oils.

Acidolysis of beef tallow

AUTHOR(S): Fujiwara, Yoshihito; Nomura, Masato; Hata, Chuta

CORPORATE SOURCE: Fac. Eng., Kinki Univ., Kure, Japan

SOURCE: Kinki Daigaku Kogakubu Kenkyu Hokoku (1978), 12, 35-40  
 CODEN: KDKHD3; ISSN: 0386-491X

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB When tallow (I number 56.42) was transesterified (acidolyzed) with safflower oil (76.4% linoleic acid [60-33-3]) at 110° for 30 min and then at 260° for 30 min in the absence of a catalyst, palmitic acid decreased from 24.4 to 16.1%, stearic acid from 17.3 to 7.7%, and oleic acid from 40.4 to 23.4%; the linoleic acid content increased from 2.1 to 48.2%. The acidolyzed tallow (I number 92) had lost the characteristic tallow odor. Similarly, noncatalytic acidolysis of tallow with soybean oil (55.1% linoleic acid) and rice oil (37.5% linoleic acid) yielded tallows with I nos. of 89 and 84 and linoleic acid contents of 26 and 24%, resp. Use of H2SO4 as a catalyst had no effect on yield or linoleate incorporation.

L8 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1977:599495 CAPLUS

DOCUMENT NUMBER: 87:199495

ORIGINAL REFERENCE NO.: 87:31583a,31586a

TITLE: Transformation of animal fats into plastic edible fat

INVENTOR(S): Sergeev, A. G.; Melamud, N. L.; Chebotareva, G. V.;

Mikhailova, I. V.; Karantsevich, L. G.; Stetsenko, A.

V.; Chubiniidze, B. N.; Sheredeko, V. M.; Bukhman, M.

M.; et al.

PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Fats, USSR

SOURCE: Fr. Demande, 28 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2297241	A1	19760806	FR 1975-454	19750108
FR 2297241	B1	19770715		

PRIORITY APPLN. INFO.: FR 1975-454 A 19750108

AB Mixing a melted animal fat with a highly unsatd. vegetable oil in the ratio 1 to 0.4-9 before hydrogenation at 180-220° and ≤2 kgf/cm<sup>2</sup> with a Ni catalyst results in selective hydrogenation of the polyunsatd. fatty acids and partial transesterification between animal fat and vegetable oil, and gives a product suitable for margarine manufacture. For example, a mixture of 1 part lard melted and mixed with 1 part sunflower oil contained linolenic acid (plus more highly unsatd. fatty acids) 0.3, linoleic acid 39.8, oleic and other monounsaturated acids 39.1, palmitic acid 13.7, and other saturated acids 8.0% of the fatty acids. Hydrogenation under the above conditions, followed by filtration, standard purification, and standard deodorization gave a product with no lard odor after 30-day storage at up to 20°, and m. 31.5°, hardness 190 gf/cm, 41.0% trans isomers, no conjugated dienes, and fatty acid composition of polyunsatd. 7.7, nonunsatd. 69.2, palmitic 14.5, and other saturated 9.1%. Stearic acid was randomly distributed among positions 1, 2, and 3 of the glycerides.

L8 ANSWER 18 OF 26 COMPENDEX COPYRIGHT 2008 EEI on STN

ACCESSION NUMBER: 2008(2):261 COMPENDEX  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel.  
 AUTHOR: Baptista, Patricia (Centre of Chemical Processes IST Technical University of Lisbon, 1049-001 Lisbon, Portugal); Felizardo, Pedro; Menezes, Jose C.; Correia, M. Joana Neiva  
 SOURCE: Analytica Chimica Acta v 607 n 2 Jan 28 2008 2008.p 153-159  
 SOURCE: Analytica Chimica Acta v 607 n 2 Jan 28 2008 2008.p 153-159  
 CODEN: ACACAM ISSN: 0003-2670  
 PUBLICATION YEAR: 2008  
 DOCUMENT TYPE: Journal  
 TREATMENT CODE: Experimental  
 LANGUAGE: English

AN 2008(2):261 COMPENDEX

AB Biodiesel is the main alternative to fossil diesel. The key advantages of its use are the fact that it is a non-toxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemically, biodiesel is a mixture of fatty acid methyl esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alcohol, in the presence of a catalyst. The European Standard (EN 14214) establishes 25 parameters that have to be

analysed to certify biodiesel quality and the analytical methods that should be used to determine those properties. This work reports the use of near infrared (NIR) spectroscopy to determine the esters content in biodiesel as well as the content in linolenic acid methyl esters (C18:3) in industrial and laboratory-scale biodiesel samples. Furthermore, calibration models for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1), linoleic (C18:2) acid methyl esters were also obtained. Principal component analysis was used for the qualitative analysis of the spectra, while partial least squares regression was used to develop the calibration models between analytical and spectral data. The results confirm that NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess the biodiesel quality control in both laboratory-scale and industrial scale samples. SCYP 2007 Elsevier B.V. All rights reserved. 32 Refs.

L8 ANSWER 19 OF 26 COMPENDEX COPYRIGHT 2008 EEI on STN

ACCESSION NUMBER: 1994(14):1489 COMPENDEX

TITLE: Estimation of conjugated octadecatrienes in edible fats and oils.

AUTHOR: Yurawecz, Martin (USFDA, Washington, DC, USA); Molina, Astrid Ana; Mossoba, Magadi; Ku, Yuoh

SOURCE: JAOCS, Journal of the American Oil Chemists' Society v 70 n 11 Nov 1993.p 1093-1099

SOURCE: JAOCS, Journal of the American Oil Chemists' Society v 70 n 11 Nov 1993.p 1093-1099

CODEN: JJASDH ISSN: 0003-021X

PUBLICATION YEAR: 1993

DOCUMENT TYPE: Journal

TREATMENT CODE: Experimental

LANGUAGE: English

AN 1994(14):1489 COMPENDEX

AB Interest in conjugated-diene fatty acids in foods has recently been increased by discovery of their antioxidant and anticarcinogenic properties. Conjugated octadecatrienes (COTs), members of another group of fatty acids, are also present in foods. COTs are formed during the processing of vegetable oils as the result of the dehydration of secondary oxidation products of linoleic acid. Little information is available concerning the occurrence and nutritional properties of COTs in edible oils. Levels of COTs, determined in 27 vegetable oils by ultraviolet (UV) spectroscopy, ranged from not detected (less than 0.001) to 0.2%. Determination of COTs by gas chromatography of the methyl esters, obtained by transesterification at room temperature with sodium methoxide/methanol, gave lower levels (not detected, 0.051%) then did determination by UV spectroscopy. Methylation with boron trifluoride produced COTs from naturally occurring moieties in the oils and, therefore, is not recommended. (Author abstract) 19 Refs.

=> d 18 20 -26 ibib abs

L8 ANSWER 20 OF 26 DISSABS COPYRIGHT (C) 2008 ProQuest Information and Learning Company; All Rights Reserved on STN

ACCESSION NUMBER: 2001:19817 DISSABS Order Number: AAI9981777

TITLE: Characterization of saponified vegetable oils, bacterial and synthetic poly(beta-hydroxyalkanoate) and derivatives using matrix-assisted laser desorption/ionization mass

AUTHOR: Saeed, Kamal Abdella [Ph.D.]; Ayorinde, Folahan [adviser]  
 CORPORATE SOURCE: Howard University (0088)  
 SOURCE: Dissertation Abstracts International, (2000) Vol. 61, No. 8B, p. 4163. Order No.: AAI9981777. 88 pages.  
 ISBN: 0-599-88183-6.  
 DOCUMENT TYPE: Dissertation  
 FILE SEGMENT: DAI  
 LANGUAGE: English

AB A new and relatively rapid method for the determination of the fatty acid composition of vegetable oils using MALDI-TOFMS is described and illustrated with the analysis of olive oil, soybean oil, "spent" frying oil, vernonia oil, and castor oil. Solutions of the saponified oils, mixed with the matrix, meso-tetrakis(pentafluorophenyl)porphyrin, provided reproducible MALDI-TOF spectra in which the ions were dominated by sodiated sodium carboxylates  $[RCOONa + Na]^+$ . Olive oil soap contained 70% oleic, 16% linoleic, 11% palmitic, 1% palmitoleic and 0.5% linolenic. Soybean oil contained 50% linoleic, 26% oleic, 15% linolenic, 6% palmitic, 2% stearic and 0.5% palmitoleic. "spent" oil contained 58% oleic, 19% palmitic, 14% linoleic and 8% palmitoleic.

The saponified vegetable oils were subsequently used as carbon sources for the biosynthesis of poly( $\beta$ -hydroxyalkanoate)s (PHAs) by *Ralstonia eutropha* (formerly known as *Alcaligenes eutrophus*). These PHAs were isolated and fully characterized using different analytical techniques. The weight-average molecular mass of the PHAs was in the order of 400 kDa and the melting point ( $T_m$ ) range was 163-174°C. MALDI-TOFMS analysis performed on partially transesterified PHAs showed intact oligomers weighing less than 10 kDa. These oligomers were detected in their cationized  $[M + Na]^+$  and  $[M + K]^+$  forms. MALDI data also revealed that the oligomers from base-catalyzed transesterification had an olefinic end-group and those obtained by acid-catalysis had an intact hydroxyl end-group. These end-groups were further confirmed by derivatization leading to the formation of acetates, methacrylates and urethanes. Moreover MALDI data showed that the PHAs from vernonia and soybean oils were copolymers of hydroxybutyrate and hydroxyvalerate. This new finding was confirmed by gas chromatography-mass spectrometry (GC-MS), proton nuclear magnetic resonance ( $^1H$  NMR) and two-dimensional homonuclear ( $^1H$ - $^1H$ ) correlation spectroscopy (COSY). Both GC-MS and  $^1H$  NMR independently confirmed that soybean and vernonia oil PHA contained  $\approx 4\%$  and  $1\%$  of hydroxyvalerate units respectively.

L8 ANSWER 1 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 2008:76495 CABA  
 DOCUMENT NUMBER: 20083065573  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel  
 AUTHOR: Baptista, P.; Felizardo, P.; Menezes, J. C.; Correia, M. J. N.  
 CORPORATE SOURCE: Centre of Chemical Processes, IST, Technical University of Lisbon, Av. Rovisco Pais, 1049-001 Lisbon, Portugal. gjnec@ist.utl.pt  
 SOURCE: Analytica Chimica Acta, (2008) Vol. 607, No. 2, pp. 153-159. 32 ref.  
 Publisher: Elsevier. Amsterdam  
 ISSN: 0003-2670  
 URL: [http://www.sciencedirect.com/science?\\_ob=Article](http://www.sciencedirect.com/science?_ob=Article)

eURL&\_udi=B6TF4-4R8HHTB-  
 3&\_user=6686535&\_coverDate=01%2F28%2F2008&\_rdoc=7&\_f  
 mt=summary&\_orig=browse&\_srch=doc-  
 info(%23toc%235216%232008%23993929997%23678118%23FLA  
 %23display%23Volume)&\_cdi=5216&\_sort=d&\_docanchor=&\_  
 ct=15&\_acct=C000066028&\_version=1&\_urlVersion=0&\_use  
 rid=6686535&md5=5c06eee83bda3655f567f3e39fc17645  
 Netherlands Antilles

PUB. COUNTRY:  
 DOCUMENT TYPE:  
 LANGUAGE:  
 ENTRY DATE:

Journal  
 English  
 Entered STN: 4 Apr 2008  
 Last Updated on STN: 4 Apr 2008

AB Biodiesel is the main alternative to fossil diesel. The key advantages of its use are the fact that it is a non-toxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemically, biodiesel is a mixture of fatty acid methyl esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alcohol, in the presence of a catalyst. The European Standard (EN 14214) establishes 25 parameters that have to be analysed to certify biodiesel quality and the analytical methods that should be used to determine those properties. This work reports the use of near infrared (NIR) spectroscopy to determine the esters content in biodiesel as well as the content in linolenic acid methyl esters (C18:3) in industrial and laboratory-scale biodiesel samples. Furthermore, calibration models for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1), linoleic (C18:2) acid methyl esters were also obtained. Principal component analysis was used for the qualitative analysis of the spectra, while partial least squares regression was used to develop the calibration models between analytical and spectral data. The results confirm that NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess the biodiesel quality control in both laboratory-scale and industrial scale samples.

L8 ANSWER 2 OF 26 CABA COPYRIGHT 2008 CABI on STN

ACCESSION NUMBER:  
 DOCUMENT NUMBER:  
 TITLE:

2006:175881 CABA  
 20063153772  
 Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil  
 Matulka, R. A.; Noguchi, O.; Nosaka, N.  
 Burdock Group, 2001 9th Avenue, Vero Beach, FL 32960, USA. rmatulka@burdockgroup.com  
 Food and Chemical Toxicology, (2006) Vol. 44, No. 9, pp. 1530-1538. 30 ref.  
 Publisher: Elsevier. Oxford  
 ISSN: 0278-6915  
 URL: <http://www.sciencedirect.com/science/journal/02786915>  
 DOI: 10.1016/j.fct.2006.04.004

PUB. COUNTRY:  
 DOCUMENT TYPE:  
 LANGUAGE:  
 ENTRY DATE:

United Kingdom  
 Journal  
 English  
 Entered STN: 3 Nov 2006  
 Last Updated on STN: 3 Nov 2006

AB To reduce the incorporation of dietary lipids into adipose tissue,

modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technological disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT). This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymatically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approximate fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approximate percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) acute study in rats (LD50>5000 mg/kg); (2) 6 week repeat-dose safety study via dietary administration to rats (NOAEL of 3500 mg/kg/day), (3) in vitro genotoxicity studies using *Salmonella typhimurium* and *Escherichia coli* (negative at 5000 mg/plate), and (4) a four-week, placebo-controlled, double blind, human clinical trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs.

L8 ANSWER 3 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 95:127362 CABA  
 DOCUMENT NUMBER: 19951407720  
 TITLE: Estimation of conjugated octadecatrienes in edible fats and oils  
 AUTHOR: Yurawecz, M. P.; Molina, A. A.; Mossoba, M.; Ku, Y.  
 CORPORATE SOURCE: USDA, Center for Food Safety and Applied Nutrition, Washington, D.C. 20204, USA.  
 SOURCE: Journal of the American Oil Chemists' Society, (1993) Vol. 70, No. 11, pp. 1093-1099. 19 ref. ISSN: 0003-021X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 24 Jul 1995  
 Last Updated on STN: 24 Jul 1995  
 AB Interest in conjugated-diene fatty acids in foods has recently been increased by discovery of their antioxidant and anticarcinogenic properties. Conjugated octadecatrienes (COTs), members of another group of fatty acids, are also present in foods. COTs are formed during the processing of vegetable oils as the result of the dehydration of secondary oxidation products of linoleic acid. Little information is available concerning the occurrence and nutritional properties of COTs in edible oils. Levels of COTs, determined in 27



vegetable oils by ultraviolet (UV) spectroscopy, ranged from not detected (<0.001) to 0.2%. Determination of COTs by gas chromatography of the methyl esters, obtained by transesterification at room temperature with sodium methoxide/methanol, gave lower levels (not detected, 0.051%) than did determination by UV spectroscopy. Methylation with boron trifluoride produced COTs from naturally occurring moieties in the oils and, therefore, is not recommended.

L8 ANSWER 4 OF 26 CABA COPYRIGHT 2008 CABI on STN  
 ACCESSION NUMBER: 93:98617 CABA  
 DOCUMENT NUMBER: 19930460890  
 TITLE: Fat technology - conversion of milk fat  
 Teknologier inden for fedtomradet - omformning af maelkefedt  
 Jart, A.  
 AUTHOR: Mejeri- og Levnedsmiddelinstitutet, Den Kgl.  
 CORPORATE SOURCE: Veterinaer- og Landbohøjskole, Copenhagen, Denmark.  
 SOURCE: Meieriposten, (1991) Vol. 80, No. 6, Meieriteknikk 2, pp. 7-10.  
 ISSN: 0025-8776  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Danish  
 ENTRY DATE: Entered STN: 1 Nov 1994  
 Last Updated on STN: 1 Nov 1994  
 AB Chemical conversion of fatty acids or triglycerides is examined. The hydrogenation process, treatment of milk fat with Se catalyst and introduction of double bonds into milk fat, chemically or, in particular, enzymically, are considered. Transesterification of milk fat, especially with a vegetable oil, e.g. sunflower oil, to achieve increased linoleic acid content and softer consistency is discussed. Addition of a long-chain fatty acid methylester is also possible. Equipment layouts are shown. Physical conversion of milk fat can be achieved simply by blending with one or more other fat substances. Suitability of 5 different methods of triglyceride fractionation, using pure milk fat or a blended product, is assessed.

L8 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:52276 CAPLUS  
 DOCUMENT NUMBER: 148:334857  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel  
 Baptista, Patricia; Felizardo, Pedro; Menezes, Jose C.; Correia, M. Joana Neiva  
 AUTHOR(S): Centre of Chemical Processes, IST, Technical  
 CORPORATE SOURCE: University of Lisbon, Lisbon, 1049-001, Port.  
 SOURCE: Analytica Chimica Acta (2008), 607(2), 153-159  
 CODEN: ACACAM; ISSN: 0003-2670  
 PUBLISHER: Elsevier B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Biodiesel is the main alternative to fossil diesel. The advantages of its use are the fact that it is a nontoxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemical, biodiesel is a mixture of fatty acid Me esters, derived from

vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alc., in the presence of a catalyst. The European Standard EN 14214 establishes 25 parameters that have to be analyzed to certify biodiesel quality and the anal. methods that should be used to determine those properties. This work reports the use of NIR spectroscopy to determine the ester content in biodiesel as well as the content of linolenic acid Me esters (C18:3) in industrial and laboratory-scale biodiesel samples. Calibration data for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1) and linoleic (C18:2) acid Me esters were also obtained. Principal component anal. was used for the qual. anal. of the spectra, while partial least squares regression was used to develop the calibration models between anal. and spectral data. NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess biodiesel quality in both laboratory and industrial samples.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:675714 CAPLUS

DOCUMENT NUMBER: 147:166528

TITLE: Method for preparation of polyunsaturated fatty acid plant sterol ester

INVENTOR(S): Xu, Xinde; Shao, Bin; Lu, Liangwei; Zhao, Quanjian; Yu, Yahong

PATENT ASSIGNEE(S): Zhejiang Medicine Co., Ltd. Xinchang Pharmaceutical Factory, Peop. Rep. China

SOURCE: Faming Zhuanti Shenqing Gongkai Shuomingshu, 9pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1982326	A	20070620	CN 2005-10062012	20051213
PRIORITY APPLN. INFO.:			CN 2005-10062012	20051213

AB The method comprises: (1) alcoholysis of triglycerides from vegetable oil in methanol and catalyst to obtain fatty acid Me ester; (2) transesterification of the obtained fatty acid Me ester with plant sterol in the presence of catalyst(C1-C5 sodium alcoholate) to give crude polyunsatd. fatty acid plant sterol ester; (3) decolorization, deodorization to provide refined polyunsatd. fatty acid plant sterol ester. The above vegetable oil is corn oil, soybean oil, sunflower seed oil or cottonseed oil, with linoleic acid content > 60%, oleic acid content > 20% and unsatd. fatty acid > 80% in total fatty acid. In step (1), the amount of methanol is 0.3-3 times triglyceride and catalyst is 0.8-5% of triglyceride weight; catalyst is toluene sulfonic acid, concentrated sulfuric acid, sodium hydrogen carbonate, diethylamine, triethylamine or C1-C5 sodium alcoholate. The above plant sterol is composed of  $\beta$ -sitosterol 40-60, brassicasterol 15-30, campesterol 15-30 and stigmasterol 0-20%. The decolorizing agent in step (3) is active argil, diatomite and/or activated carbon. The method is suitable for food production due to no employment of harmful organic solvent, and can realize mass production due to simple production process and low reaction requirement.

L8 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:679133 CAPLUS

DOCUMENT NUMBER: 145:270468

TITLE: Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil

AUTHOR(S): Matulka, R. A.; Noguchi, O.; Nosaka, N.

CORPORATE SOURCE: Burdock Group, Vero Beach, FL, 32960, USA

SOURCE: Food and Chemical Toxicology (2006), 44(9), 1530-1538

CODEN: FCTOD7; ISSN: 0278-6915

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To reduce the incorporation of dietary lipids into adipose tissue, modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technol. disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT). This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approx. fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approx. percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) Acute study in rats (LD50 > 5000 mg/kg); (2) 6 Wk repeat-dose safety study via dietary administration to rats (NOAEL of 3500 mg/kg/day); (3) In vitro genotoxicity studies using Salmonella typhimurium and Escherichia coli (neg. at 5000 mg/plate), and. (4) A four-week, placebo-controlled, double blind, human clin. trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:844263 CAPLUS

DOCUMENT NUMBER: 144:236172

TITLE: Correlation between fatty acid composition and cold filter plugging point of biodiesels

AUTHOR(S): Hancsok, J.; Kovacs, F.; Krar, M.; Magyar, S.; Recseg,

K.; Czuppon, T.  
 CORPORATE SOURCE: University of Veszprem, Veszprem, H-8201, Hung.  
 SOURCE: Preprints of Symposia - American Chemical Society,  
 Division of Fuel Chemistry (2005), 50(2), 793-796  
 CODEN: PSADEFZ; ISSN: 1521-4648  
 PUBLISHER: American Chemical Society, Division of Fuel Chemistry  
 DOCUMENT TYPE: Journal; (computer optical disk)  
 LANGUAGE: English  
 AB A range of vegetable oils (from the standard rape seed oil to used frying oil) was studied as a potential source for biodiesel production. Among the biodiesel samples, produced with the transesterification of various vegetable oils (with MeOH/Na methoxide mixture), rape oil-derived biodiesel fulfills the requirements of the valid European standard (EN 14214). As a result of the higher oleic acid and lower linoleic acid content, it has better oxidation stability than the other products. In the rape oil-derived biodiesel, the concentration of C18:0 is lower and that of C22:0 is only 0.3%, resulting in a preferable cold filter plugging point (CFPP) value. A relatively good compromise between the oxidation stability, the CFPP value and the unsatd. fatty acid content was observed. In addition, approx. linear correlation is obtained by plotting the CFPP values vs. the ratio of total unsatd. fatty acids to saturated fatty acids.  
 is  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:859415 CAPLUS  
 DOCUMENT NUMBER: 139:339267  
 TITLE: Processes for transesterification, esterification, interesterification by dielectric heating  
 INVENTOR(S): Charlier De Chily, Pierre; Raynard, Mikael  
 PATENT ASSIGNEE(S): Satie Sa, Fr.  
 SOURCE: Fr. Demande, 39 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2839069	A1	20031031	FR 2002-5396	20020425
FR 2839069	B1	20060407		
WO 2003090669	A2	20031106	WO 2003-FR1307	20030424
WO 2003090669	A3	20040401		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003262827	A1	20031110	AU 2003-262827	20030424

EP 1501783 A2 20050202 EP 2003-740664 20030424

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SKPRIORITY APPLN. INFO.: FR 2002-5396 A 20020425  
WO 2003-FR1307 W 20030424

AB These processes not only make it possible to decrease the reaction times, compared with the traditional processes, and they also lead to esters with remarkable physicochem. characteristics: these processes make it possible to significantly reduce the acid value and the peroxide index of the mixture. This present invention consists in manufacturing by dielec. heating (microwaves and high frequencies) of polyols partially or completely esterified starting from a mixture of (A) vegetable or animal oils or fats, fatty acids, fatty acid esters, hydrocarbons or derivs. of these latter and compds. and (B) compds. containing or generating OH groups, like glycerol, polyglycerols, polyalkylene glycols polyvinyl alcs., sugars, and sterols. The heat treatment is carried out by dielec. heating, preferably in an atmospheric deprived of oxygen. The frequencies of the electromagnetic waves vary from 3 Mhz to 30 GHz. The esters find multiple applications: the esters of polymeric alcs. are for example the surfactants used in cosmetics or in foods.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:531030 CAPLUS

DOCUMENT NUMBER: 139:229589

TITLE: Characterization of lipase-catalyzed structured lipids from selected vegetable oils with conjugated linoleic acid: Their oxidative stability with rosemary extracts  
AUTHOR(S): Lee, J.-H.; Kim, M. R.; Kim, H.-R.; Kim, I.-H.; Lee, K.-T.

CORPORATE SOURCE: Dept. of Food and Nutrition, Chungnam Natl. Univ., Taejeon, S. Korea

SOURCE: Journal of Food Science (2003), 68(5), 1653-1658  
CODEN: JFDSA3; ISSN: 0022-1147

PUBLISHER: Institute of Food Technologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Response surface methodol. was used to optimize the lipase-catalyzed transesterification reaction between conjugated linoleic acid (CLA) and soybean oil. On the basis of the model, structured lipids (SLs) were synthesized from CLA and soybean oil or sunflower oil. CLA was incorporated in SL-soybean (24.4 mol%) and SL-sunflower (23.1 mol%), resp. Isomerization to trans, trans CLA was observed during the reaction. Throughout the oxidation study, all SLs showed higher peroxide values (POVs), p-anisidine values, and 2-thiobarbituric acid-reactive substance values than their counterparts. Rosemary exts. with a different amount (100 to 300 ppm) could effectively reduce oxidation in soybean oil, sunflower oil, and their SLs.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:527098 CAPLUS

DOCUMENT NUMBER: 138:92642

TITLE: Biodiesel from vegetable oils via transesterification in supercritical methanol

AUTHOR(S): Demirbas, Ayhan  
 CORPORATE SOURCE: Department of Chemical Education, Karadeniz Technical University, Trabzon, 61035, Turk.  
 SOURCE: Energy Conversion and Management (2002), 43(17), 2349-2356  
 CODEN: ECMADL; ISSN: 0196-8904  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Transesterifications of six vegetable oil samples in supercrit. methanol were studied without using any catalyst. Me esters of vegetable oils have several outstanding advantages among other new-renewable and clean engine fuel alternatives. The variables affecting the Me ester yield during the transesterification reaction, such as molar ratio of alc. to vegetable oil and reaction temperature, were studied. Compared to number 2 Diesel fuel, all of the vegetable oils are much more viscous, while the Me esters of vegetable oils (biodiesels) are slightly more viscous.  
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L8 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:107295 CAPLUS  
 DOCUMENT NUMBER: 136:153747  
 TITLE: Transesterified C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids  
 INVENTOR(S): Mosier, Benjamin; Duffy, Bryn J.  
 PATENT ASSIGNEE(S): MJ Research & Development, L.P., USA  
 SOURCE: PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010114	A2	20020207	WO 2001-US24369	20010802
WO 2002010114	A3	20020815		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2418066	A1	20020207	CA 2001-2418066	20010802
AU 2001081027	A	20020213	AU 2001-81027	20010802
US 20020017629	A1	20020214	US 2001-921238	20010802
US 7252779	B2	20070807		
EP 1307422	A2	20030507	EP 2001-959474	20010802
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
TW 225858	B	20050101	TW 2001-90118924	20010802
MX 2003PA00964	A	20040217	MX 2003-PA964	20030131

US 20080020956	A1	20080124	US 2007-821689	20070625
PRIORITY APPLN. INFO.:			US 2000-222477P	P 20000802
			US 2001-921238	A1 20010802
			WO 2001-US24369	W 20010802

OTHER SOURCE(S): MARPAT 136,153747

AB A composition, suitable for use as a lubricant, a heat transfer agent, a rheol. modifier, a corrosion inhibitor, or a moisture inhibitor, consists of the reaction products of the acid-catalyzed transesterification of a C8-22-fatty acid ester (preferably a C18-fatty acid ester) with a C1-18-alc., in which the acid portion (typically a phosphate or a sulfate) can be incorporated as the inorg. esters into a portion of the products. The preferred starting esters are derived from ricinoleic acid, oleic acid, linoleic acid, stearic acid, lauric acid, myristic acid, and palmitic acid (including dimerized and trimerized acids), especially when present in a vegetable oil (preferably castor oil (containing >80% ricinoleic acid esters)). Transesterification of castor oil with n-propanol in the presence of minor amts. of phosphoric acid yielded Pr ricinoleate, glycerol mono-, di-, and triricinoleates, glycerin, propanol, and various phosphate esters of the hydroxyacid reaction products. When used as a lubricant can contain an added miscibility-enhancement additive (e.g., C10-18-alc., esters, etc.), to increase miscibility with other fluids (e.g., naphthenes, paraffins, polyol esters, polyalkylene glycols, etc.).

L8 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:59044 CAPLUS

DOCUMENT NUMBER: 136:249953

TITLE: Biodiesel Fuels from Vegetable Oils:  
Transesterification of Cynara cardunculus L. Oils with Ethanol

AUTHOR(S): Encinar, J. M.; Gonzalez, J. F.; Rodriguez, J. J.;  
Tejedor, A.

CORPORATE SOURCE: Departamento de Ingenieria Quimica y Energetica,  
Universidad de Extremadura, Badajoz, 06071, Spain

SOURCE: Energy & Fuels (2002), 16(2), 443-450  
CODEN: ENFUEM; ISSN: 0887-0624

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A study was made of the transesterification reaction of Cynara cardunculus L. oil by ethanol, using sodium hydroxide and potassium hydroxide as catalysts. The objective of the work was to characterize the Et esters for use as biodiesel in compression ignition motors. The operation variables employed were temperature (25-75°), catalyst type (sodium hydroxide and potassium hydroxide), catalyst concentration (0.25-1.5%), and ethanol/oil molar ratio (3:1-15:1). Oil mass (200 g), reaction time (120 min), and alc. type (ethanol) were fixed as common parameters in all the expts. The evolution of the process was followed by gas chromatog., determining the concentration of the Et esters at different reaction times. The biodiesel was characterized by determining its d., viscosity, high heating value, cetane index, cloud and pour points, characteristics of distillation, and flash and combustion points according to ISO norms. The biodiesel with the best properties was obtained using an ethanol/oil molar ratio of 12:1, sodium hydroxide as catalyst (1%) and 75° temperature. This biodiesel has very similar properties to those of number 2 diesel fuel.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:147279 CAPLUS  
 DOCUMENT NUMBER: 124:230523  
 ORIGINAL REFERENCE NO.: 124:42725a,42728a  
 TITLE: Optimization and scale-up of enzymic synthesis of structured lipids using RSM  
 AUTHOR(S): Huang, Kuan-Hsiang; Akoh, Casimir C.  
 CORPORATE SOURCE: Dept. of Food Science & Technology, The Univ. of Georgia, Athens, GA, 30602-7610, USA  
 SOURCE: Journal of Food Science (1996), 61(1), 137-41  
 CODEN: JFDSAZ; ISSN: 0022-1147  
 PUBLISHER: Institute of Food Technologists  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Enzymic synthesis of structured lipids by transesterification of Et caprylate (EC) and soybean oil and sunflower oil (90% oleic acid) in hexane was optimized using response surface methodol. (RSM). Incubation time (IT), molar ratio of Et caprylate to total triglycerides (MR), percentage of soybean oil as source of long-chain triglycerides (PS), and long-chain triglyceride concentration (TC) were assumed the most important factors affecting nutritional attributes of structured lipids based on caprylic acid (C8:0) and linoleic acid (C18:2 n-6) content. Optimum conditions for synthesis of structured lipids were: IT = 26.4 h; MR = 8; PS = 75%; TC = 0.58 M. The capryloyl acyl residues in triglyceride predicted by RSM was 67.6 (mol%) and linoleoyl 14.5%. Large scale synthesis was successful. The model was verified exptl.

L8 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:142194 CAPLUS  
 DOCUMENT NUMBER: 98:142194  
 ORIGINAL REFERENCE NO.: 98:21643a,21646a  
 TITLE: Margarine fat blend  
 INVENTOR(S): Stratmann, Wilhelm; Vermaas, Leo Frans; Dijkshoorn, Willem  
 PATENT ASSIGNEE(S): Unilever N. V., Neth.; Unilever PLC  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 70050	A1	19830119	EP 1982-200682	19820604
EP 70050	B1	19840919		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 9431	T	19841015	AT 1982-200682	19820604
AU 8284775	A	19821223	AU 1982-84775	19820610
AU 548605	B2	19851219		
US 4425371	A	19840110	US 1982-388353	19820614
ZA 8204171	A	19840125	ZA 1982-4171	19820614
CA 1196527	A1	19851112	CA 1982-405065	19820614
JP 58013350	A	19830125	JP 1982-102932	19820615
JP 03052941	B	19910813		
PRIORITY APPLN. INFO.:		GB 1981-18354	A	19810615



EP 1982-200682 A 19820604

AB A spreadable margarine-fat blend which melts at body temperature is produced from vegetable oil by a process comprising (1) transesterification at 25-175°, using as catalyst alkali metals, their alloys, their hydroxydes or alkoxides (0.01-0.5 weight%), of a mixture of an oil with ≥20% linoleic acid (45-75 weight%) and an oil with ≥80% fatty acids which are saturated and have a chain length of ≥16 C atoms (25-5 weight%), (2) fractionation to obtain the liquid (olein) fraction; the solid (stearin) fraction is separated for reuse, (3) mixing 50-90% of the olein fraction with 10-50 weight% of an oil with ≥40% linoleic acid, and (4) processing by working and cooling. The product has a high proportion of unsat. fatty acids, good organoleptic properties, melts in the mouth, and has a low trans-fatty acid level (≤15%). Thus, a mixture of sunflower oil (60%) and sunflower oil hydrogenated to a m.p. of 69° (40%) was vacuum-dried and transesterified at 120° for 20 min in the presence of NaOC2H5 [141-52-6] (0.12 weight%), dry-fractionated at 35° in a pelletizer, and a margarine-fat blend prepared by mixing 20 parts sunflower oil with 80 parts of the olein. The blend (84 weight%) was mixed with an aqueous phase (16 weight%) and processed through Votator unit. The stearin was recirculated by substitution for part of the hydrogenated oil to be transesterified.

L8 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:591532 CAPLUS  
 DOCUMENT NUMBER: 91:191532  
 ORIGINAL REFERENCE NO.: 91:30839a,30842a  
 TITLE: Exchange of fatty acid component of some edible oils. Acidolysis of beef tallow  
 AUTHOR(S): Fujihara, Yoshihito; Nomura, Masato; Hata, Chuta  
 CORPORATE SOURCE: Fac. Eng., Kinki Univ., Kure, Japan  
 SOURCE: Kinki Daigaku Kogakubu Kenkyu Hokoku (1978), 12, 35-40  
 CODEN: KDKHD3; ISSN: 0386-491X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB When tallow (I number 56.42) was transesterified (acidolyzed) with safflower oil (76.4% linoleic acid [60-33-3]) at 110° for 30 min and then at 260° for 30 min in the absence of a catalyst, palmitic acid decreased from 24.4 to 16.1%, stearic acid from 17.3 to 7.7%, and oleic acid from 40.4 to 23.4%; the linoleic acid content increased from 2.1 to 48.2%. The acidolyzed tallow (I number 92) had lost the characteristic tallow odor. Similarly, noncatalytic acidolysis of tallow with soybean oil (55.1% linoleic acid) and rice oil (37.5% linoleic acid) yielded tallows with I nos. of 89 and 84 and linoleic acid contents of 26 and 24%, resp. Use of H2SO4 as a catalyst had no effect on yield or linoleate incorporation.

L8 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1977:599495 CAPLUS  
 DOCUMENT NUMBER: 87:199495  
 ORIGINAL REFERENCE NO.: 87:31583a,31586a  
 TITLE: Transformation of animal fats into plastic edible fat  
 INVENTOR(S): Sergeev, A. G.; Melamud, N. L.; Chebotareva, G. V.; Mikhailova, I. V.; Karantsevich, L. G.; Stetsenko, A. V.; Chubinidze, B. N.; Sheredeko, V. M.; Bukhman, M. M.; et al.  
 PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Fats, USSR  
 SOURCE: Fr. Demande, 28 pp.

DOCUMENT TYPE: CODEN: FRXXBL  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 French  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2297241	A1	19760806	FR 1975-454	19750108
FR 2297241	B1	19770715		

PRIORITY APPLN. INFO.: FR 1975-454 A 19750108

AB Mixing a melted animal fat with a highly unsatd. vegetable oil in the ratio 1 to 0.4-9 before hydrogenation at 180-220° and  $\leq 2$  kgf/cm<sup>2</sup> with a Ni catalyst results in selective hydrogenation of the polyunsatd. fatty acids and partial transesterification between animal fat and vegetable oil, and gives a product suitable for margarine manufacture. For example, a mixture of 1 part lard melted and mixed with 1 part sunflower oil contained linolenic acid (plus more highly unsatd. fatty acids) 0.3, linoleic acid 39.8, oleic and other monounsatd. acids 39.1, palmitic acid 13.7, and other saturated acids 8.0% of the fatty acids. Hydrogenation under the above conditions, followed by filtration, standard purification, and standard deodorization gave a product with no lard odor after 30-day storage at up to 20°, and m. 31.5%, hardness 190 gf/cm, 41.0% trans isomers, no conjugated dienes, and fatty acid composition of polyunsatd. 7.7, nonunsatd. 69.2, palmitic 14.5, and other saturated 9.1%. Stearic acid was randomly distributed among positions 1, 2, and 3 of the glycerides.

L8 ANSWER 18 OF 26 COMPENDEX COPYRIGHT 2008 EEI on STN

ACCESSION NUMBER: 2008(2):261 COMPENDEX

TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel.  
 AUTHOR: Baptista, Patricia (Centre of Chemical Processes IST Technical University of Lisbon, 1049-001 Lisbon, Portugal); Felizardo, Pedro; Menezes, Jose C.; Correia, M. Joana Neiva

SOURCE: Analytica Chimica Acta v 607 n 2 Jan 28 2008 2008.p 153-159

SOURCE: Analytica Chimica Acta v 607 n 2 Jan 28 2008 2008.p 153-159

CODEN: ACACAM ISSN: 0003-2670

PUBLICATION YEAR: 2008

DOCUMENT TYPE: Journal

TREATMENT CODE: Experimental

LANGUAGE: English

AN 2008(2):261 COMPENDEX

AB Biodiesel is the main alternative to fossil diesel. The key advantages of its use are the fact that it is a non-toxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020. Chemically, biodiesel is a mixture of fatty acid methyl esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alcohol, in the presence of a catalyst. The European Standard (EN 14214) establishes 25 parameters that have to be analysed to certify biodiesel quality and the analytical methods that

should be used to determine those properties. This work reports the use of near infrared (NIR) spectroscopy to determine the esters content in biodiesel as well as the content in linolenic acid methyl esters (C18:3) in industrial and laboratory-scale biodiesel samples. Furthermore, calibration models for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1), linoleic (C18:2) acid methyl esters were also obtained. Principal component analysis was used for the qualitative analysis of the spectra, while partial least squares regression was used to develop the calibration models between analytical and spectral data. The results confirm that NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess the biodiesel quality control in both laboratory-scale and industrial scale samples. SCYPY 2007 Elsevier B.V. All rights reserved. 32 Refs.

L8 ANSWER 19 OF 26 COMPENDEX COPYRIGHT 2008 EEI on STN

ACCESSION NUMBER: 1994(14):1489 COMPENDEX  
 TITLE: Estimation of conjugated octadecatrienes in edible fats and oils.  
 AUTHOR: Yurawecz, Martin (USFDA, Washington, DC, USA); Molina, Astrid Ana; Mossoba, Magadi; Ku, Yuoh  
 SOURCE: JAOCS, Journal of the American Oil Chemists' Society v 70 n 11 Nov 1993.p 1093-1099  
 SOURCE: JAOCS, Journal of the American Oil Chemists' Society v 70 n 11 Nov 1993.p 1093-1099  
 CODEN: JJASDH ISSN: 0003-021X  
 PUBLICATION YEAR: 1993  
 DOCUMENT TYPE: Journal  
 TREATMENT CODE: Experimental  
 LANGUAGE: English

AN 1994(14):1489 COMPENDEX

AB Interest in conjugated-diene fatty acids in foods has recently been increased by discovery of their antioxidant and anticarcinogenic properties. Conjugated octadecatrienes (COTs), members of another group of fatty acids, are also present in foods. COTs are formed during the processing of vegetable oils as the result of the dehydration of secondary oxidation products of linoleic acid. Little information is available concerning the occurrence and nutritional properties of COTs in edible oils. Levels of COTs, determined in 27 vegetable oils by ultraviolet (UV) spectroscopy, ranged from not detected (less than 0.001) to 0.2%. Determination of COTs by gas chromatography of the methyl esters, obtained by transesterification at room temperature with sodium methoxide/methanol, gave lower levels (not detected, 0.051%) than did determination by UV spectroscopy. Methylation with boron trifluoride produced COTs from naturally occurring moieties in the oils and, therefore, is not recommended. (Author abstract) 19 Refs.

L8 ANSWER 20 OF 26 DISSABS COPYRIGHT (C) 2008 ProQuest Information and Learning Company; All Rights Reserved on STN

ACCESSION NUMBER: 2001:19817 DISSABS Order Number: AAI9981777  
 TITLE: Characterization of saponified vegetable oils, bacterial and synthetic poly(beta-hydroxyalkanoate) and derivatives using matrix-assisted laser desorption/ionization mass spectrometry  
 AUTHOR: Saeed, Kamal Abdella [Ph.D.]; Ayorinde, Folahan [adviser]  
 CORPORATE SOURCE: Howard University (0088)  
 SOURCE: Dissertation Abstracts International, (2000) Vol. 61, No.

8B, p. 4163. Order No.: AA19981777. 88 pages.  
 ISBN: 0-599-88183-6.

DOCUMENT TYPE: Dissertation  
 FILE SEGMENT: DAI  
 LANGUAGE: English

AB A new and relatively rapid method for the determination of the fatty acid composition of vegetable oils using MALDI-TOFMS is described and illustrated with the analysis of olive oil, soybean oil, "spent" frying oil, vernonia oil, and castor oil. Solutions of the saponified oils, mixed with the matrix, meso-tetrakis(pentafluorophenyl)porphyrin, provided reproducible MALDI-TOF spectra in which the ions were dominated by sodiated sodium carboxylates  $[RCOONa + Na]^+$ . Olive oil soap contained 70% oleic, 16% linoleic, 11% palmitic, 1% palmitoleic and 0.5% linolenic. Soybean oil contained 50% linoleic, 26% oleic, 15% linolenic, 6% palmitic, 2% stearic and 0.5% palmitoleic. "spent" oil contained 58% oleic, 19% palmitic, 14% linoleic and 8% palmitoleic.

The saponified vegetable oils were subsequently used as carbon sources for the biosynthesis of poly( $\beta$ -hydroxyalkanoate)s (PHAs) by *Ralstonia eutropha* (formerly known as *Alcaligenes eutrophus*). These PHAs were isolated and fully characterized using different analytical techniques. The weight-average molecular mass of the PHAs was in the order of 400 kDa and the melting point ( $T_m$ ) range was 163-174°C. MALDI-TOFMS analysis performed on partially transesterified PHAs showed intact oligomers weighing less than 10 kDa. These oligomers were detected in their cationized  $[M + Na]^+$  and  $[M + K]^+$  forms. MALDI data also revealed that the oligomers from base-catalyzed transesterification had an olefinic end-group and those obtained by acid-catalysis had an intact hydroxyl end-group. These end-groups were further confirmed by derivatization leading to the formation of acetates, methacrylates and urethanes. Moreover MALDI data showed that the PHAs from vernonia and soybean oils were copolymers of hydroxybutyrate and hydroxyvalerate. This new finding was confirmed by gas chromatography-mass spectrometry (GC-MS), proton nuclear magnetic resonance (1H NMR) and two-dimensional homonuclear (1H-1H) correlation spectroscopy (COSY). Both GC-MS and 1H NMR independently confirmed that soybean and vernonia oil PHA contained  $\approx 4\%$  and 1% of hydroxyvalerate units respectively.

L8 ANSWER 21 OF 26 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN

ACCESSION NUMBER: 2006-0412925 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRGHT. 2006 INIST-CNRS. All rights reserved.

TITLE (IN ENGLISH): Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil

AUTHOR: MATULKA R. A.; NOGUCHI O.; NOSAKA N.

CORPORATE SOURCE: Burdock Group, 2001 9th Avenue, Vero Beach, FL 32960, United States; The Nissshin Oil&O Group Ltd., Research Laboratory, 1-Banchi, Shinmei-cho, Yokosuka-si, Kanagawa-ken, Japan

SOURCE: Food and chemical toxicology, (2006), 44(9), 1530-1538, 30 refs.

ISSN: 0278-6915 CODEN: FCTOD7

DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United Kingdom

LANGUAGE: English  
 AVAILABILITY: INIST-10616, 354000142308590110  
 AN 2006-0412925 PASCAL  
 CP Copyright .COPYRG. 2006 INIST-CNRS. All rights reserved.  
 AB To reduce the incorporation of dietary lipids into adipose tissue, modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technological disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT). This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymatically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approximate fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approximate percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) acute study in rats (LD.sub.5.sub.0> 5000 mg/kg); (2) 6 week repeat-dose safety study via dietary administration to rats (NOAEL of 3500 mg/kg/day), (3) in vitro genotoxicity studies using *Salmonella typhimurium* and *Escherichia coli* (negative at 5000 mg/plate), and (4) a four-week, placebo-controlled, double blind, human clinical trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs.

L8 ANSWER 22 OF 26 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.  
 on STN  
 ACCESSION NUMBER: 1994-0324747 PASCAL  
 COPYRIGHT NOTICE: Copyright .COPYRG. 1994 INIST-CNRS. All rights reserved.  
 TITLE (IN ENGLISH): Estimation of conjugated octadecatrienes in edible fats and oils  
 AUTHOR: YURAWECZ M. P.; MOLINA A. A.; MAGDI MOSSOBA; YUOH KU  
 CORPORATE SOURCE: USFDA, cent. food safety applied nutrition, Washington DC 20204, United States  
 SOURCE: JAOCS. Journal of the American Oil Chemists' Society, (1993), 70(11), 1093-1099, 19 refs.  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: United States  
 LANGUAGE: English  
 AVAILABILITY: INIST-204, 354000026438650070

AN 1994-0324747 PASCAL  
 CP Copyright .COPYRG. 1994 INIST-CNRS. All rights reserved.  
 AB Interest in conjugated-diene fatty acids in foods has recently been increased by discovery of their antioxidant and anticarcinogenic properties. Conjugated octadecatrienes (COTs), members of another group of fatty acids, are also present in foods. COTs are formed during the processing of vegetable oils as the result of the dehydration of secondary oxidation products of linoleic acid. Little information is available concerning the occurrence and nutritional properties of COTs in edible oils. Levels of COTs, determined in 27 vegetable oils by ultraviolet (UV) spectroscopy, ranged from not detected (<0.001) to 0.2%. Determination of COTs by gas chromatography of the methyl esters, obtained by transesterification at room temperature with sodium methoxide/methanol, gave lower levels (not detected, 0.051%) than did determination by UV spectroscopy

L8 ANSWER 23 OF 26 PROMT COPYRIGHT 2008 Gale Group on SIN

ACCESSION NUMBER: 2006:490876 PROMT  
 TITLE: Renewable polyols gain ground as petrochemicals prices keep rising.(bio-polyols update)  
 AUTHOR(S): White, Liz  
 SOURCE: Urethanes Technology, (August-Sept 2006) Vol. 23, No. 4, pp. 22(5).  
 PUBLISHER: Crain Communications, Inc.  
 DOCUMENT TYPE: Newsletter  
 LANGUAGE: English  
 WORD COUNT: 4069

\*FULL TEXT IS AVAILABLE IN THE ALL FORMAT\*

AB Natural oil-based polyols (NOPs) are getting a lot of attention at present, and rising oil prices are accelerating the polyurethane sector's interest in such materials, as an alternative to current commercial polyols based on petroleum products.  
 THIS IS THE FULL TEXT: COPYRIGHT 2006 Crain Communications, Inc.

Subscription: 67.50 British pounds per year. Published bimonthly. 965 East Jefferson Avenue, Detroit, MI 48207-9966.

L8 ANSWER 24 OF 26 PROMT COPYRIGHT 2008 Gale Group on SIN

ACCESSION NUMBER: 1998:679795 PROMT  
 TITLE: Chemoenzymatic synthesis and characterization of urethane oils for surface coatings.  
 AUTHOR(S): Athawale, V.D.; Bhabhe, M.D.  
 SOURCE: The Journal of Coatings Technology, (April 1998) Vol. 70, No. 879, pp. 43(6).  
 PUBLISHER: Federation of Societies for Coatings Technology  
 DOCUMENT TYPE: Newsletter  
 LANGUAGE: English  
 WORD COUNT: 3323

\*FULL TEXT IS AVAILABLE IN THE ALL FORMAT\*

AB INTRODUCTION

L8 ANSWER 25 OF 26 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on

STN  
 ACCESSION NUMBER: 2008:188403 SCISEARCH  
 THE GENUINE ARTICLE: 256VM  
 TITLE: Multivariate near infrared spectroscopy models for predicting the methyl esters content in biodiesel  
 AUTHOR: Baptista, Patricia; Felizardo, Pedro; Menezes, Jose C.; Correia, M. Joana Neiva (Reprint)  
 CORPORATE SOURCE: Univ Tecn Lisbon, IST, Ctr Chem Proc, Av Rovisco Pais, P-1049001 Lisbon, Portugal (Reprint); Univ Tecn Lisbon, IST, Ctr Chem Proc, P-1049001 Lisbon, Portugal; Univ Tecn Lisbon, IST, Ctr Biol & Chem Engrn, P-1049001 Lisbon, Portugal  
 qjnc@ist.utl.pt  
 COUNTRY OF AUTHOR: Portugal  
 SOURCE: ANALYTICA CHIMICA ACTA, (28 JAN 2008) Vol. 607, No. 2, pp. 153-159.  
 ISSN: 0003-2670.  
 PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.  
 DOCUMENT TYPE: Article; Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 32  
 ENTRY DATE: Entered STN: 21 Feb 2008  
 Last Updated on STN: 21 Feb 2008

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*  
 AB Biodiesel is the main alternative to fossil diesel. The key advantages of its use are the fact that it is a non-toxic renewable resource, which leads to lower emissions of polluting gases. European governments are targeting the incorporation of 20% of biofuels in the general fuels until 2020.  
 Chemically, biodiesel is a mixture of fatty acid methyl esters, derived from vegetable oils or animal fats, which is usually produced by a transesterification reaction, where the oils/fats react with an alcohol, in the presence of a catalyst. The European Standard (EN 14214) establishes 25 parameters that have to be analysed to certify biodiesel quality and the analytical methods that should be used to determine those properties.  
 This work reports the use of near infrared (NIR) spectroscopy to determine the esters content in biodiesel as well as the content in linolenic acid methyl esters (C18:3) in industrial and laboratory-scale biodiesel samples. Furthermore, calibration models for myristic (C14:0), palmitic (C16:0), stearic (C18:0), oleic (C18:1), linoleic (C18:2) acid methyl esters were also obtained. Principal component analysis was used for the qualitative analysis of the spectra, while partial least squares regression was used to develop the calibration models between analytical and spectral data. The results confirm that NIR spectroscopy, in combination with multivariate calibration, is a promising technique to assess the biodiesel quality control in both laboratory-scale and industrial scale samples. (C) 2007 Elsevier B.V. All rights reserved.

L8 ANSWER 26 OF 26 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN  
 ACCESSION NUMBER: 2006:864026 SCISEARCH  
 THE GENUINE ARTICLE: 080KS  
 TITLE: Safety evaluation of a medium- and long-chain triacylglycerol oil produced from medium-chain triacylglycerols and edible vegetable oil

AUTHOR: Matulka R A (Reprint); Noguchi O; Nosaka N  
 CORPORATE SOURCE: Burdock Grp, 2001 9th Ave, Vero Beach, FL 32960 USA  
 (Reprint); Burdock Grp, Vero Beach, FL 32960 USA; Nisshin  
 Oil Co Grp Ltd, Res Lab, Yokosuka, Kanagawa, Japan  
 rmatulka@burdockgroup.com  
 COUNTRY OF AUTHOR: USA; Japan  
 SOURCE: FOOD AND CHEMICAL TOXICOLOGY, (SEP 2006) Vol. 44, No. 9,  
 pp. 1530-1538.  
 ISSN: 0278-6915.  
 PUBLISHER: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD  
 LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND.  
 DOCUMENT TYPE: Article; Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 30  
 ENTRY DATE: Entered STN: 21 Sep 2006  
 Last Updated on STN: 21 Sep 2006

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB To reduce the incorporation of dietary lipids into adipose tissue, modified fats and oils have been developed, such as medium-chain triacylglycerols (MCT). Typical dietary lipids from vegetable oils, termed long-chain triacylglycerols (LCT), are degraded by salivary, intestinal and pancreatic lipases into two fatty acids and a monoacyl glycerol; whereas, MCT are degraded by the same enzymes into three fatty acids and the simple glycerol backbone. Medium-chain fatty acids (MCFA) are readily absorbed from the small intestine directly into the bloodstream and transported to the liver for hepatic metabolism, while long-chain fatty acids (LCFA) are incorporated into chylomicrons and enter the lymphatic system. MCFA are readily broken down to carbon dioxide and two-carbon fragments, while LCFA are re-esterified to triacylglycerols and either metabolized for energy or stored in adipose tissue. Therefore, consumption of MCT decreases the incorporation of fatty acids into adipose tissue. However, MCT have technological disadvantages precluding their use in many food applications. A possible resolution is the manufacture and use of a triacylglycerol containing both LCT and MCT, termed medium- and long-chain triacylglycerol (MLCT).

This manuscript describes studies performed for the safety evaluation of a MLCT oil enzymatically produced from MCT and edible vegetable oil (containing LCT), by a transesterification process. The approximate fatty acid composition of this MLCT consists of caprylic acid (9.7%), capric acid (3.3%), palmitic acid (3.8%), stearic acid (1.7%), oleic acid (51.2%), linoleic acid (18.4%), linolenic acid (9.0%), and other fatty acids (2.9%). The approximate percentages of long (L) and medium (M) fatty acids in the triacylglycerols are as follows: L, L, L (55.1%), L, L, M (35.2%), L, M, M (9.1%), and M, M, M (0.6%). The studies included: (1) acute study in rats (LD50 > 5000 mg/kg); (2) 6 week repeat-dose safety study via dietary administration to rats (NOAEL of 3500 mg/kg/day), (3) in vitro genotoxicity studies using *Salmonella typhimurium* and *Escherichia coli* (negative at 5000 mg/plate), and (4) a four-week, placebo-controlled, double blind, human clinical trial utilizing 20 test subjects (no effects at 42 g MLCT/day). These data are corroborated by other studies published in the peer-reviewed literature on analogous MLCTs. (c) 2006 Elsevier Ltd. All rights reserved.

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(FILE 'HOME' ENTERED AT 13:57:22 ON 02 OCT 2008)



FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUALINE, AQUIRE, BABS, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CERAB, CIN, COMPENDEX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT, GENBANK, INSPEC, INSPHYS, IPA, KOSMET, METADEX, NAPRALERT, ...' ENTERED AT 13:57:33 ON 02 OCT 2008

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L1 3 S (CONJUGATED (2W) LINOLEIC (2W) ESTER) (L) (DISTILLING OR DIS
L2 1 S (SAFFLOWER (A) OIL (3W) METHYL (A) ESTER) (L) (CONJUGATED (2W
L3 2 S SOYBEAN (A) OIL (L) CONJUGATED (A) LINOLEIC (4W) ESTER
L4 1 S SOYBEAN (S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLE
L5 0 S (METHYL (3W) OCTADECADIENOIC) (L) TRANSESTERIFICATION (L) ISOM
L6 0 S OCTADECADIENOIC (L) TRANSESTERIFICATION (L) ISOMERIZATION
L7 11 S ((SOY (A) BEAN) (A) OIL) (L) TRANSESTER? AND LINOLEIC
L8 26 S (VEGETABLE (2W) OIL) (S) TRANSESTERIFICATION (L) LINOLEIC
L9 6 S PREPARE (L) LINOLEIC (3W) ESTER
L10 0 S L9 AND L8
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=> s prepare (conjugated (a) linoleic (a) acid (s) alkyl (s) esters)
MISSING OPERATOR 'PREPARE (CONJUGATED)'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.
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=> s prepare (L) (conjugated (a) linoleic (a) acid (s) alkyl (s) esters)
20 FILES SEARCHED...
L11 0 PREPARE (L) (CONJUGATED (A) LINOLEIC (A) ACID (S) ALKYL (S) ESTE
RS)
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=> s (conjugated (a) linoleic (a) acid (s) alkyl (s) esters)
31 FILES SEARCHED...
L12 25 (CONJUGATED (A) LINOLEIC (A) ACID (S) ALKYL (S) ESTERS)
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=> s l12 and isomer?
L13 12 L12 AND ISOMER?
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=> d l13 1-12 ibib abs
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L13 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2008 ACS ON STN
ACCESSION NUMBER: 2005:1021569 CAPLUS
DOCUMENT NUMBER: 143:305298
TITLE: Compositions comprising reverse isomers of
conjugated linoleic acid
INVENTOR(S): Saebo, Asgeir; Saebo, Per Christian; Griinari, Mikko;
Bauman, Dale E.; Shinfield, Kevin
PATENT ASSIGNEE(S): Natural Asa, Norway
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005087017	A2	20050922	WO 2005-US8015	20050310
WO 2005087017	A3	20060504		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,  
 SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

US 20050215641 A1 20050929 US 2005-77044 20050310  
 EP 1729851 A2 20061213 EP 2005-731278 20050310

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,  
 HR, LV, MK, YU

PRIORITY APPLN. INFO.: US 2004-551983P P 20040310  
 WO 2005-US8015 W 20050310

AB The present invention relates to the field of human and animal nutrition,  
 and in particular to certain novel compns. of conjugated linoleic acids  
 (CLA). In particular, the present invention relates to CLA compns.  
 comprising the c10,t12-, c10,c12-, t9,c11 and c9,c11 isomers of  
 conjugated linoleic acid.

L13 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:673080 CAPLUS

DOCUMENT NUMBER: 143:159467

TITLE: Production and purification of esters of conjugated  
 linoleic acids

INVENTOR(S): Rongione, Joseph C.; Galante, Jenifer Heydinger;  
 Clauss, Steven L.; Bernhardt, Randal J.; Xayariboun,  
 Phouvieng

PATENT ASSIGNEE(S): Stepan Company, USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005067888	A1	20050728	WO 2003-US41289	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2550100	A1	20050728	CA 2003-2550100	20031223
AU 2003299920	A1	20050803	AU 2003-299920	20031223
EP 1696873	A1	20060906	EP 2003-800190	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
BR 2003018676	A	20061128	BR 2003-18676	20031223

NO 2006002762 A 20060629 NO 2006-2762 20060613  
 US 20070191619 A1 20070816 US 2007-581374 20070312  
 PRIORITY APPLN. INFO.: WO 2003-US41289 W 20031223

AB A process to refine esters of conjugated linoleic acids via distillation in a single or multi-pass distillation operation is provided. Thermal rearrangement of conjugated linoleic acid components during distillation is prevented or reduced by the use of a low residence time and/or reduced pressure distillation apparatus. A process to produce refined esters of conjugated linoleic acids is also provided. The process transesterifies a linoleic acid-containing oil to generate an alkyl ester composition which further undergoes isomerization at a temps. typically between about 90-140 °C to form an ester stream containing conjugated linoleic acid esters, which is then distilled to obtain the refined esters of conjugated linoleic acids. The transesterification and isomerization steps can be performed in one reaction vessel without an intervening distillation step. The transesterification and isomerization steps can occur concurrently in a continuous reaction system using a dual reaction zone apparatus. Refined ester comps. produced by the processes and enriched in desirable conjugated linoleic acid isomers are also contemplated. For example, Safflower oil Me esters were distilled via two passes in a thin film evaporator to reduce the amount of Me palmitate, Me stearate, Me oleate, and increase the percentage of Me linoleate.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:525885 CAPLUS

DOCUMENT NUMBER: 141:73307

TITLE: Isomerization and saponification process for the production of conjugated linoleic acid from alkyl linoleates

INVENTOR(S): Horlacher, Peter; Ruf, Karl-Heinz; Timmermann, Franz; Adams, Wolfgang; Von Kries, Rainer

PATENT ASSIGNEE(S): Cognis Deutschland GmbH & Co. Kg, Germany

SOURCE: Ger. Offen., 5 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10259157	A1	20040701	DE 2002-10259157	20021218
WO 2004055142	A1	20040701	WO 2003-EP13922	20031209
W: AU, BR, CA, JP, KR, NO, NZ, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003292214	A1	20040709	AU 2003-292214	20031209
EP 1572844	A1	20050914	EP 2003-767772	20031209
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 2006510752	T	20060330	JP 2004-559786	20031209
US 20060189817	A1	20060824	US 2005-538383	20050613
NO 2005003461	A	20050715	NO 2005-3461	20050715
PRIORITY APPLN. INFO.:			DE 2002-10259157	A 20021218

WO 2003-EP13922 W 20031209

AB A procedure for the production of conjugated linoleic acid comprises: (A) the isomerization of linoleic acid C1-5 (un)branched alkyl esters (e.g., Et linoleate) in the presence of alkali metal alcoholates (e.g., potassium methanolate) isomerized; (B) saponification of the free, conjugated linoleic acids from the ester; and of (C) crystallization of the conjugated linoleic acids.

L13 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:138683 CAPLUS  
 DOCUMENT NUMBER: 140:183582  
 TITLE: Procedure for the production of conjugated linoleic acids from alkyl linoleates  
 INVENTOR(S): Busch, Stefan; Zander, Lars; Albiez, Wolfgang; Horlacher, Peter; Westfechtel, Alfred  
 PATENT ASSIGNEE(S): Cognis Deutschland GmbH & Co. KG, Germany  
 SOURCE: Ger. Offen., 3 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10236086	A1	20040219	DE 2002-10236086	20020807
WO 2004015046	A1	20040219	WO 2003-EP8339	20030729
W: CA, JP, NO, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1527153	A1	20050504	EP 2003-784096	20030729
EP 1527153	B1	20070228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 2005534708	T	20051117	JP 2004-526806	20030729
AT 355351	T	20060315	AT 2003-784096	20030729
ES 2282706	T3	20071016	ES 2003-784096	20030729
US 20060106238	A1	20060518	US 2005-523728	20050204
US 7241910	B2	20070710		
PRIORITY APPLN. INFO.:			DE 2002-10236086	A 20020807
			WO 2003-EP8339	W 20030729

OTHER SOURCE(S): MARPAT 140:183582

AB A procedure for the production of conjugated linoleic acids is described in which: (A) linoleic acid lower alkyl esters (e.g., Et linoleate) in the presence of alkali metal alcoholates are isomerized; (B) the isomerized linoleic acid lower alkyl esters are saponified in the presence of aqueous alkali solns.; and (C) the saponification product is neutralized with phosphoric acid.

L13 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:891941 CAPLUS  
 DOCUMENT NUMBER: 139:366597  
 TITLE: Procedure for the production of conjugated linoleic acid glycerides from lower

alkyl unsaturated fatty acid esters  
 INVENTOR(S): Horlacher, Peter; Ruf, Karl-Heinz; Timmermann, Franz;  
 Gierke, Juergen  
 PATENT ASSIGNEE(S): Cognis Deutschland Gmbh & Co. KG, Germany  
 SOURCE: Ger. Offen., 4 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10219781	A1	20031113	DE 2002-10219781	20020503
WO 2003093214	A1	20031113	WO 2003-EP4302	20030425
W: AU, BR, BY, CA, CN, HR, HU, ID, IN, JP, KR, MX, NO, NZ, PH, PL, RU, SG, UA, US, ZA				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003222837	A1	20031117	AU 2003-222837	20030425
EP 1501781	A1	20050202	EP 2003-718788	20030425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 20050176977	A1	20050811	US 2004-513314	20041103
US 7179929	B2	20070220		

PRIORITY APPLN. INFO.: DE 2002-10219781 A 20020503  
 WO 2003-EP4302 W 20030425

OTHER SOURCE(S): MARPAT 139:366597

AB A process for the preparation of conjugated linoleic acid glycerides, with a decreased trans-trans isomer contents, is described comprising:  
 (A) catalytically isomerizing an unsatd. fatty acid lower alkyl ester R1CO2R2 (R1CO = C16-22 acyl; R2 = C1-4 alkyl) at 100-160° with basic catalysts; and (B) subjecting the obtained conjugated fatty acyl lower alkyl ester to transesterification with glycerol and continuously distilling off the free lower alcs. from the transesterification reaction mixture

L13 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:610112 CAPLUS  
 DOCUMENT NUMBER: 139:148792  
 TITLE: Conjugated linoleic acid powder for food use  
 INVENTOR(S): Fimreite, Duane  
 PATENT ASSIGNEE(S): Natural ASA, Norway  
 SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Pat. Appl. 2002 13,365.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030149288	A1	20030807	US 2002-200889	20020723
US 20020013365	A1	20020131	US 2001-836788	20010417
US 6756405	B2	20040629		
CA 2493705	A1	20040129	CA 2003-2493705	20030721

WO 2004009071 A1 20040129 WO 2003-US22674 20030721  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,  
 UG, US, UZ, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003252076 A1 20040209 AU 2003-252076 20030721  
 AU 2003252076 B2 20070531  
 EP 1545492 A1 20050629 EP 2003-765813 20030721  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 JP 2006508200 T 20060309 JP 2004-523185 20030721  
 NO 2005000920 A 20050221 NO 2005-920 20050221

## PRIORITY APPLN. INFO.:

US 2000-198487P P 20000418  
 US 2001-836788 A2 20010417  
 US 2002-200889 A 20020723  
 WO 2003-US22674 W 20030721

AB A powder containing a high amount of conjugated linoleic acid or other oil is provided. The powder contains either triglycerides containing CLA, free fatty acids of CLA, or alkyl esters of CLA or another desired oil. The powder is free flowing and has good organoleptic properties. The powder may be used as a dietary supplement or combined with foods to form a food product suitable for consumption by animals or humans.

L13 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:338069 CAPLUS  
 DOCUMENT NUMBER: 134:325505  
 TITLE: Use of trans-trans isomers of conjugated  
 linoleic acid  
 INVENTOR(S): Rogers, Julia Sarah; Barclay, Scott S.; Parmar,  
 Preyesh; Cain, Frederick William; Taran, Victoria  
 PATENT ASSIGNEE(S): Unilever N.V., Neth.; Unilever PLC; Lodders Crokiaan BV  
 SOURCE: Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1097708	A1	20010509	EP 2000-203510	20001011
EP 1097708	B1	20030917		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 249822	T	20031015	AT 2000-203510	20001011
PRIORITY APPLN. INFO.:			EP 1999-308714	A 19991102

AB Conjugated linoleic acid (CLA)-isomer mixts. rich in trans/trans isomers were found to have excellent antiinflammatory properties and can be used for these purposes in foods or in food supplements; simultaneously these isomers improve the product performance of many food products.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2008 ACS ON STN  
 ACCESSION NUMBER: 1999:722692 CAPLUS  
 DOCUMENT NUMBER: 131:321959  
 TITLE: Isomer enriched conjugated linoleic acid compositions  
 INVENTOR(S): Jerome, Daria; Skarie, Carl; Saebo, Asgeir  
 PATENT ASSIGNEE(S): Conlinco, Inc., USA; Natural Asa  
 SOURCE: Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 954975	A2	19991110	EP 1999-105496	19990317
EP 954975	A3	20010613		
EP 954975	B1	20051221		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6060514	A	20000509	US 1998-72422	19980504
US 6214372	B1	20010410	US 1998-72421	19980504
CA 2293336	A1	19991111	CA 1999-2293336	19990317
CA 2293336	C	20040601		
CA 2293338	A1	19991111	CA 1999-2293338	19990317
CA 2293338	C	20070828		
WO 9956780	A1	19991111	WO 1999-US5807	19990317
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 9956781	A1	19991111	WO 1999-US5808	19990317
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9930083	A	19991123	AU 1999-30083	19990317
AU 747057	B2	20020509		
AU 9930953	A	19991123	AU 1999-30953	19990317
AU 747058	B2	20020509		
JP 2001508085	T	20010619	JP 1999-555363	19990317
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ES 2255741	T3	20060701	ES 1999-105496	19990317
AT 366521	T	20070815	AT 1999-105495	19990317
ES 2286867	T3	20071201	ES 1999-105495	19990317
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IN 2000KN00451	A	20070907	IN 2000-KN451	20001030
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MX 2000PA10794	A	20040521	MX 2000-PA10794	20001101
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NO 2000005565	A	20010103	NO 2000-5565	20001103
NO 2000005566	A	20010103	NO 2000-5566	20001103
IN 2000KN00487	A	20050311	IN 2000-KN487	20001107
ZA 2000006568	A	20010808	ZA 2000-6568	20001113
US 20010031308	A1	20011018	US 2001-789953	20010221
US 6465666	B2	20021015		
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US 7101914	B2	20060905		
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PRIORITY APPLN. INFO.:			US 1998-72421	A 19980504
			US 1998-72422	A 19980504
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			US 2001-789953	A1 20010222
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			US 2003-700000	A1 20031103
OTHER SOURCE(S):	MARPAT 131:321959			
AB	Compns. and methods for using conjugated linoleic acid preps. enriched for the t10,c12 and c9,t11 isomers are disclosed. Preps. of conjugated linoleic acid containing a ratio of t10,c12 to c9,t11 of $\geq 1.2:1$ are desirable for a wide variety of nutritional, therapeutic and pharmacol. uses.			
L13	ANSWER 9 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN			
ACCESSION NUMBER:	1999:613659 CAPLUS			
DOCUMENT NUMBER:	131:228021			
TITLE:	Conjugated linoleic acid compositions			
INVENTOR(S):	Saebo, Asgeir; Skarie, Carl; Jerome, Daria; Haraldsson, Gudmundur			
PATENT ASSIGNEE(S):	Conlinco, Inc., USA			
SOURCE:	PCT Int. Appl., 57 pp.			
	CODEN: PIXXD2			
DOCUMENT TYPE:	Patent			
LANGUAGE:	English			
FAMILY ACC. NUM. COUNT:	5			
PATENT INFORMATION:				

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9947135	A1	19990923	WO 1999-US5806	19990317



W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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 CA 2289648 A1 19990923 CA 1999-2289648 19990317  
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 AU 9931886 A 19991011 AU 1999-31886 19990317  
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 EP 950410 A1 19991020 EP 1999-105497 19990317  
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY

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 AT 350028 T 20070115 AT 1999-105497 19990317  
 ES 2279586 T3 20070816 ES 1999-105497 19990317  
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W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9954745 A 200000306 AU 1999-54745 19990810  
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W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, T2, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9963996 A 20000417 AU 1999-63996 19990923  
 ZA 2000004855 A 20010615 ZA 2000-4855 20000913  
 NO 2000004615 A 20001107 NO 2000-4615 20000915  
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PRIORITY APPLN. INFO.:  
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 WO 1999-US18094 W 19990810  
 WO 1999-US22126 W 19990923

OTHER SOURCE(S): MARPAT 131:228021

AB Novel compns. containing conjugated linoleic acids are efficacious as animal feed additives and human dietary supplements. Linoleic acid is converted

to its conjugated forms by a novel method in which the resulting composition is low in certain unusual isomers compared to conventional conjugated linoleic products. The process involves dissolving an alkali compatible with a nonaq. medium (e.g. KOH, CsOH, CsSO<sub>3</sub>, NaEt<sub>4</sub>OH) in propylene glycol, adding a seed oil containing  $\geq 50\%$  linoleic acid, isomerizing by heating under an inert gas to 130-165°, separating the fatty acid fraction by acidification, and optional further purification and dehydration. The linoleic acid is converted  $\geq 90\%$  to conjugated cis-9,trans-11- and trans-10,cis-12-octadecadienoic acids; the product contains  $<1\%$  11,13-isomers,  $<1\%$  8,10-isomers,  $<1\%$  trans,trans-isomers, and  $<1\%$  total unidentified linoleic acid species. Sunflower and safflower oils are preferred, owing to their high native 9,12-linoleic acid content and low levels of sterols, phospholipids, and other residues.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1950:14107 CAPLUS

DOCUMENT NUMBER: 44:14107

ORIGINAL REFERENCE NO.: 44:2795g-i,2796a

TITLE: Diene addition product

INVENTOR(S): Teeter, Howard M.; Scholfield, Charles L.; Cowan, John C.

PATENT ASSIGNEE(S): United States of America, as represented by the Secy. of Agr.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2483791		19491004	US 1946-684915	19460719

AB Alkyl esters of conjugated linoleic acid and conjugated linoleyl alc. gave 1,4-adducts with alkyl crotonates and MeCH:CHCN. The products are plasticizers, softeners, and tackifiers for synthetic resins, lubricating oils, corrosion inhibitors, and intermediates for high polymers. Me esters of soybean oil isomerized 6 hrs. at 170° with a Ni-C catalyst to 37.5% conjugation, and 60 g. condensed with MeCH:CHCO<sub>2</sub>Et 86, 10 hrs. at 245-60° gave 76.5% addition product (I) b. 207-17°, n<sub>D</sub> 1.4651, d<sub>20</sub> 0.9480, I number 64.6, compatible with nitrocellulose, cellulose acetate, vinyl chloride-vinyl acetate copolymer, ethylcellulose, ester gum, polystyrene, and methacrylate polymer. The kinematic viscosity at 100°F., 210°F., and viscosity index, for I, the 2-ethylhexyl, 2-ethylbutyl, and octyl esters, and hydrogenated I were as follows, resp.: 27.1, 4.66, 94.7; 34.8, 5.49, 103.0; 35.8, 5.63, 105.0; 38.9, 6.21, 117.0; 28.6, 4.87, 101.0. Conjugated soybean-oil Me esters 41, MeCH:CHCN 35.2, 10 hrs. at 240-50° gave 62.5% 1,4-adduct, n<sub>D</sub> 1.4749, d<sub>20</sub> 0.9488, I number 72.3. Alcs. from Na-EtOH reduction of soybean-oil Me esters were isomerized, Ni-C catalyst, 6 hrs. at 170° to give 35% conjugated dienol 26.7, condensed with MeCH:CHCO<sub>2</sub>Et 40.3, 10 hrs. at 238-60° to give 38.2% 1,4-adduct b0.17-0.29 226-30°.

L13 ANSWER 11 OF 12 PASCAL COPYRIGHT 2008 INIST-CNRS. ALL RIGHTS RESERVED.

on STN  
 ACCESSION NUMBER: 2003-0328686 PASCAL  
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 TITLE (IN ENGLISH): Ag.sup.+HPLC of conjugated linoleic acids on a silica-based stationary phase. Part IV: A reference stationary phase and retention mechanisms  
 AUTHOR: CROSS Reginald F.; ZACKARI Henrik  
 CORPORATE SOURCE: Environment and Biotechnology Centre, Swinburne University of Technology, PO Box 218, Hawthorn, Vic. 3122, Australia  
 SOURCE: Journal of separation science, (2003), 26(6-7), 480-488, 14 refs.  
 ISSN: 1615-9306  
 DOCUMENT TYPE: Journal  
 BIBLIOGRAPHIC LEVEL: Analytic  
 COUNTRY: Germany, Federal Republic of  
 LANGUAGE: English  
 AVAILABILITY: INIST-17941, 35400011184790040  
 AN 2003-0328686 PASCAL  
 CP Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.  
 AB In the previous paper on the Ag.sup.+HPLC of conjugated linoleic acids (CLAs) on a silica-based stationary phase, we examined the relative retentions of the CLAs, their methyl esters (CLAMES), and stearic acid. The retention of the CLAs far exceeds the sum of the retention of the CLAMES and stearic acid. In this paper we isolate the interactions at the silica surface by determining the retentions of the same compounds on the NH.sup.+sub.4 cation exchanger that is the precursor to the Ag.sup.+ column in the manufacturing process. On the NH.sup.+sub.4 column, the CLAMES are very weakly retained, but the sum of the retentions of the CLAMES plus stearic acid is equal to that of the CLAs. It was determined that stearic acid is retained to the same degree on both the NH.sup.+sub.4 and Ag.sup.+ stationary phases. By implication, the CLA carboxylic acid functionality does not interact with Ag.sup.+ and thus three-centre complexes of the Ag.sup.+ with the CLA n bonds and carboxyl group do not occur. (Independent supporting evidence is also presented.) A model for CLA retention on the Ag.sup.+ stationary phase that explains the synergy of retention is presented. It involves a random arrangement of collapsed Ag.sup.+ alkyl sulphonate bonded phase on the silica surface. The nature of retention on the NH4 stationary phase is also discussed. Partial separation of the CLAs on the NH.sub.4+ stationary phase shows that  $\pi$  bond interactions with the silica surface also contribute to the separations of the CLAs, the CLAMES, and other unsaturated analytes. As was found on the Ag.sup.+ column in the absence acetonitrile, normal phase elution occurs and log k' versus log (% strong solvent) plots for all analytes are linear on the NH.sup.+sub.4 column. (Where the specific displacement mechanism of unsaturates from the Ag.sup.+ by ACN was present, the log-linear plots were straight lines.)

L13 ANSWER 12 OF 12 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN  
 ACCESSION NUMBER: 2007:375261 SCISEARCH  
 THE GENUINE ARTICLE: 145AT  
 TITLE: Convenient enzymatic preparation of conjugated linoleic acid alkyl esters with C6-C22 alcohols

AUTHOR: Dianoczki, Csilla; Recseg, Katalin (Reprint); Kovari, Katalin; Poppe, Laszlo  
 CORPORATE SOURCE: Bunge Europe, Ctr Res & Dev, Kvassay J U 1, H-1095 Kvassay, Hungary (Reprint); Bunge Europe, Ctr Res & Dev, H-1095 Kvassay, Hungary; Budapest Univ Technol & Econ, Inst Organ Chem, H-1111 Budapest, Hungary; Budapest Univ Technol & Econ, Res Grp Alkaloid Chem, H-1111 Budapest, Hungary  
 katalin.recseg@bunge.com; poppe@mail.bme.hu  
 COUNTRY OF AUTHOR: Hungary  
 SOURCE: JOURNAL OF MOLECULAR CATALYSIS B-ENZYMATIC, (1 APR 2007) Vol. 45, No. 1-2, pp. 45-49.  
 ISSN: 1381-1177.  
 PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.  
 DOCUMENT TYPE: Article; Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 33  
 ENTRY DATE: Entered STN: 12 Apr 2007  
 Last Updated on STN: 12 Apr 2007

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB A fast and effective enzymatic process was developed for preparing CLA C6-C22 alkyl esters using immobilized Candida antarctica lipase B (Novozym 435). The reaction parameters (temperature, amount of starting materials and enzyme, effect of water removal during the reaction) were optimized. The re-use study showed that the enzyme can be used at least ten times without significant loss in its activity. Reactions between equimolar amounts of starting materials with 8.9% Novozym 435 (w/w(CLA)) at 65 degrees C in vacuum (20 mbar) for 1.5 h resulted in almost quantitatively (> 95%) wax esters needing no further treatment. At room temperature, CLA esters with long chain (>= 18 degrees C) saturated alcohols are solids. (c) 2006 Elsevier B.V. All rights reserved.

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FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APOLLIT, AQUALINE, AQUIRE, BABS, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA-VTB, CERAB, CIN, COMPENDEX, CONFSCI, COPPERLIT, CORROSION, DISSABS, ENCOMPLIT, GENBANK, INSPEC, INSPHYS, IPA, KOSMET, METADEX, NAPRALERT, ...' ENTERED AT 13:57:33 ON 02 OCT 2008

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 L4 1 S SOYBEAN (S) TRANSESTERIFICATION (S) ISOMERIZATION AND (LINOLE  
 L5 0 S (METHYL (3W) OCTADECADIENOIC) (L) TRANSESTRIFICATION (L) ISOM  
 L6 0 S OCTADECADIENOIC (L) TRANSESTRIFICATION (L) ISOMERIZATION  
 L7 11 S ((SOY (A) BEAN) (A) OIL) (L) TRANSESTER? AND LINOLEIC  
 L8 26 S (VEGETABLE (2W) OIL) (S) TRANSESTERIFICATION (L) LINOLEIC  
 L9 6 S PREPARE (L) LINOLEIC (3W) ESTER  
 L10 0 S L9 AND L8  
 L11 0 S PREPARE (L) (CONJUGATED (A) LINOLEIC (A) ACID (S) ALKYL (S)  
 L12 25 S (CONJUGATED (A) LINOLEIC (A) ACID (S) ALKYL (S) ESTERS)  
 L13 12 S L12 AND ISOMER?

Serial No. 10/581374 B

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